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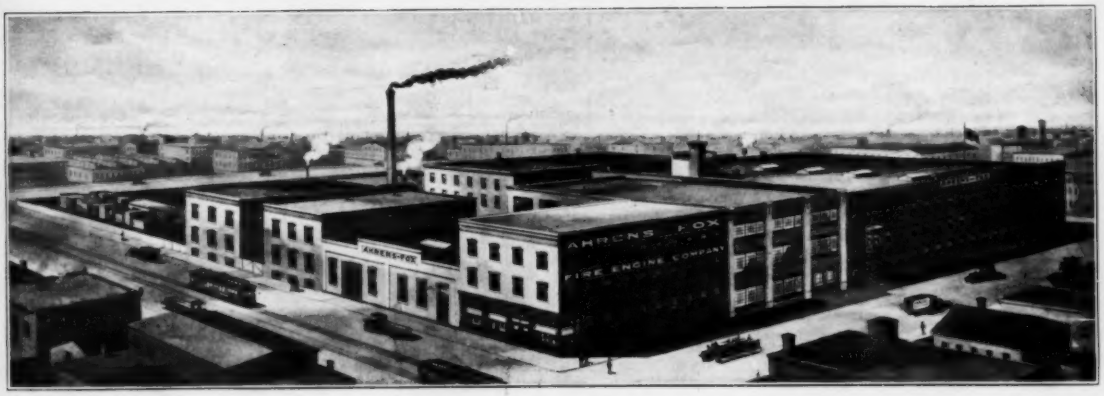
The Journal of the Fire Protection Profession

FEBRUARY 19, 1930



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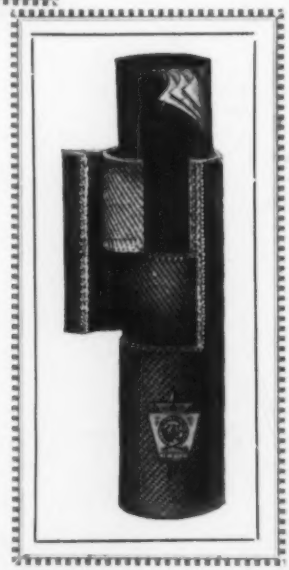

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NORTH CAROLINA

IN REPLY ADDRESS
Fire Department.

Nov. 13th, 1929.

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Sometime ago I received an inquiry from you as to our "Shuredry" Salvage Covers.

We have been using them for the past two and one-half years and have received great results from them.

I am enclosing several Newspaper clippings so that you may see what the people, as well as the Firemen, think of them, as we have saved hundreds of thousands of dollars by their use.

Respectfully.

W H Palmer

WHP/a Chief Fire Department.

Chief Palmer
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Water Proofed Salvage Covers
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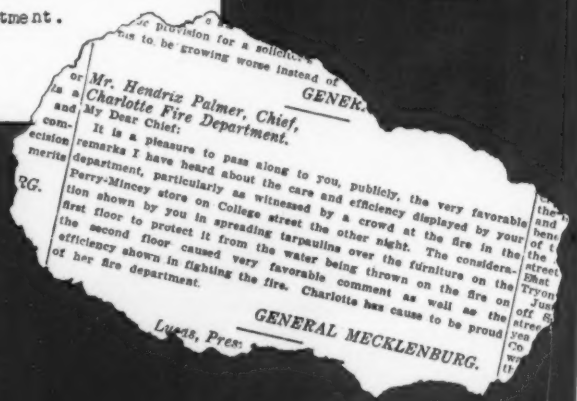

Mr. Hendriz Palmer, Chief,
Charlotte Fire Department.
My Dear Chief:
It is a pleasure to pass along to you, publicly, the very favorable remarks I have heard about the care and efficiency displayed by your department, particularly as witnessed by a crowd at the fire in the Perry-Mincey store on College street the other night. The considera... tion shown by you in spreading tarpaulins over the furniture on the first floor to protect it from the water being thrown on the fire on the second floor caused very favorable comment as well as the efficiency shown in fighting the fire. Charlotte has cause to be proud of her fire department.

GENERAL MECKLENBURG.

This is but one of the clippings from the Charlotte Observer referred to in Chief Palmer's letter.

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FIRE ENGINEERING

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Reaping the Benefits

¶ Writes R. L. Jones, Secty., Farmville, Va., Fire Department:

"FIRE ENGINEERING is read extensively and with much interest by the members of our department and many of the articles have proven very beneficial to us. We used your ideas in fighting a recent fire in a cleaning and pressing establishment here and were much pleased with the results.
"We sincerely hope other fire departments are reaping the same benefits from your magazine that we are. Enclosed find check for $5, renewing our subscription for two years."

¶ Thanks for the kind words, Brother Jones. We'll bet dollars to doughnuts that the members of the Farmville Fire Department, as such keen students of modern fire fighting methods, know and do their stuff in a way that would make any larger department sit up and take notice.

¶ Naturally, we always like to have our readers tell us how they utilize the information appearing in FIRE ENGINEERING. It's the best guide our editors have. And remember, brick-bats are just as welcome as bouquets.

The Publishers

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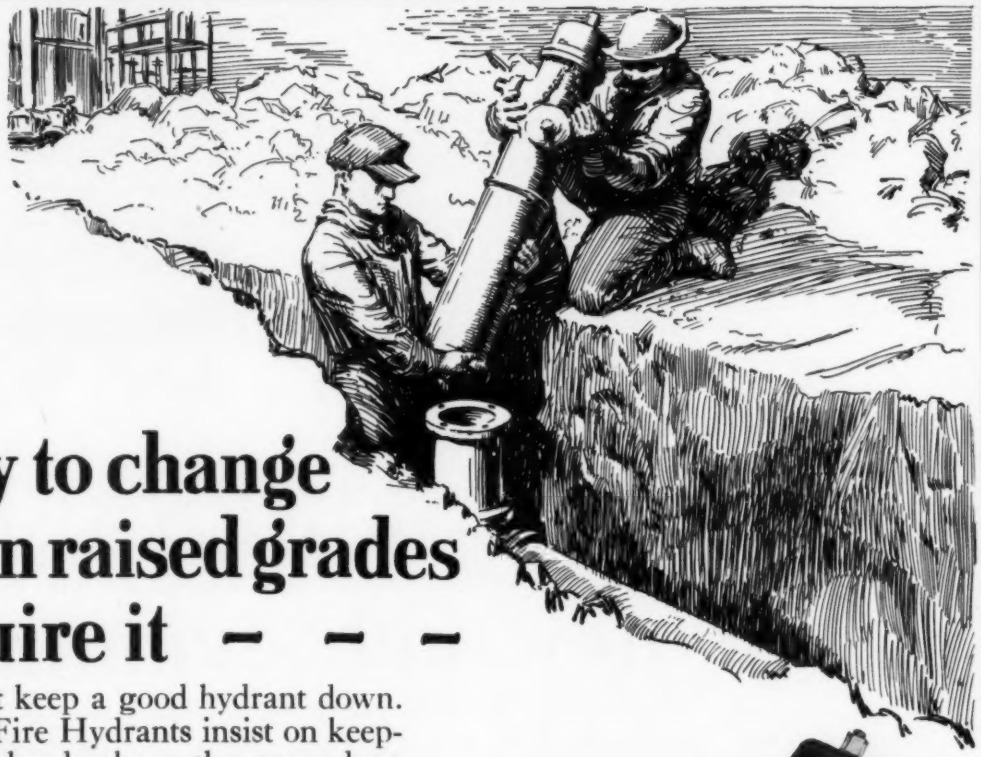

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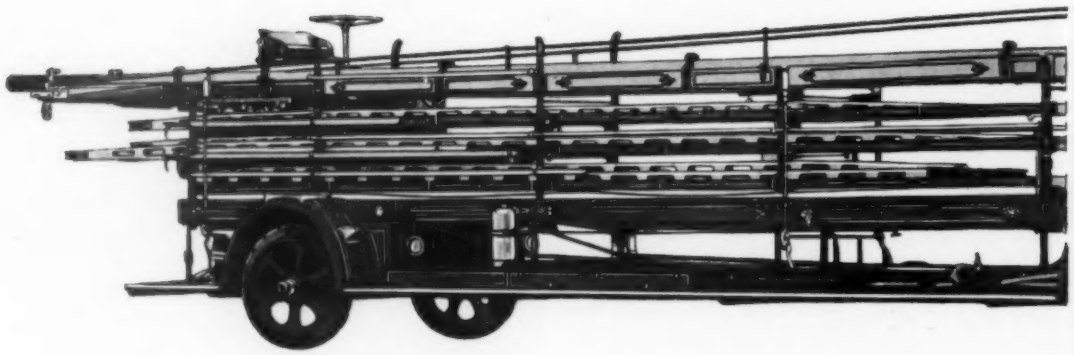

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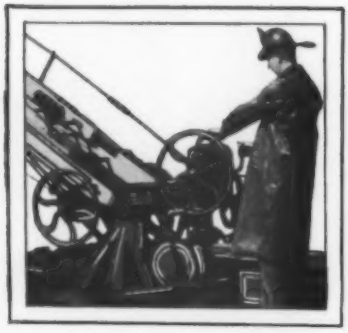

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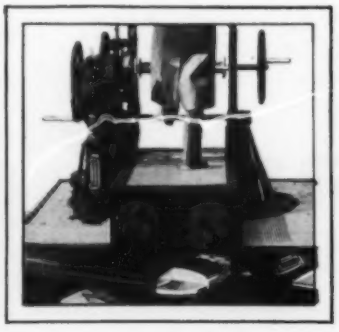

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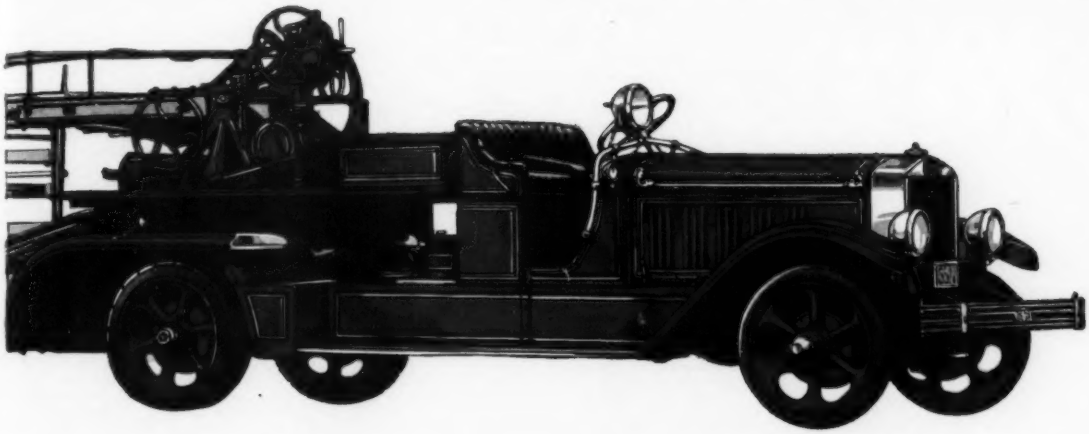

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Clipping from Oct. 16, 1929 issue of Fire Engineering

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New U-34 Barton Fire Pump front end mounted on Chevrolet Six. This pump recently passed the 12-hour Test of the National Board of Fire Underwriters.

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WRITE FOR BULLETIN 60

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(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXXIII FEBRUARY 19, 1930 NUMBER 4

What Causes Fires to Start and What Puts Them Out

Chemistry of Substances and Fire Extinguishing Principles Explained in a Popular Style—Reactions of Simple Elements

By H. WERNER, Professor of Chemistry, University of Kansas.

WHEN we say we know the chemistry of a thing, we mean this, we know all of the essential properties of that particular thing. We know how it behaves under certain conditions, we know what it does, what it feels like, tastes like, looks like and in case of an explosion, what it looks like. When you have all of these pieces of knowledge so you can explain it, then you have what we call the chemistry of the thing.

Take for example a familiar thing like gasoline; what do I mean by familiar? I mean we are acquainted with some of its chemical and physical properties. What is the chemical property of gasoline? Well, one chemical property of gasoline is that it will explode if mixed with a proper mixture of air. It will burn, that's a chemical property. Why do I call that a chemical property? We call it a chemical property because when a thing does something and is completely changed by the burning; the explosion does change it to some kind of gases, to carbon-monoxide and something else. It is changed completely. Carbon monoxide is poisonous. The gasoline has been completely changed and it is a chemical reaction. Anything in which the subject is changed is a physical property. The fireman, in dealing with fires and explosions, is dealing with chemical and physical properties of certain substances. Let's take for example, the chemical changes you are familiar with, it is hardly neecssary to go into the change.

Take copper. Copper is malleable and it is not brittle at all. What's the color of copper—anybody know the color of copper? —It is copper-color of course. That's a great stunt to pull on the people at home. They will say brown, etc. Just tell them it is copper. It turns black when heated long enough—You see the black scaled off, those black scales will make a paper black. That black substance is copper oxide. The copper has been changed to a black substance with the union of copper and oxygen. That is a chemical reaction.

Oxidation of Substances

Now there are all kinds of chemical reactions. Chemical reaction is when something reacts on something else. The particular kind of chemical reaction we are going to deal with is what the Chemists call "Oxidation"; that involves the application of oxygen to some other substance, such as wood or other substances. We are going to deal with that particular kind of chemical reaction. There are different kinds of oxidations. I will say there are different kinds. We will consider particularly the kind of oxidation which involves the transfer of oxygen to something else.

Now, then, we talk about oxygen, the source of man's life, the source is the oxygen out of the air. I intend now to show you air consists of approxmately one-fifth of oxygen. You will be interested perhaps in seeing that what I am going to do is take a candle and let it burn itself out. What do we mean by that? It has used up all of the oxygen and the oxygen has been taken out of the air. One-fifth of the top was oxygen and the other four-fifths was nitrogen. I am going to make a little float, to float a candle. Now this candle is going to burn up this oxygen, consequently the water will represent approximately the amount of oxygen in the top. Now, what other sources of oxygen are there besides the air? There are chemicals which contain oxygen. They give up their oxygen very rapidly.

Oxygen from Air and Chemicals

We get oxygen from the air and from chemicals but only from chemicals which give up their oxygen readily. What are the conditions which will determine as to whether oxidation will take place? The first thing that determines whether oxidation will take place or not is the nature of the substance. Carbon will oxidize, you know that. Gold will not oxidize; a gold ring, if it is gold, will never tarnish, never will turn. Platinum will not oxidize; copper will oxidize; iron will oxidize; What other substances are there that will not oxidize? Has it occured to any of you? Does anybody know what other substances there are that will not oxidize? It ought to have occured to you by now! Well, let me answer it for you. Substances that are already fully oxidized will not oxidize any more. Substances like carbon dioxide will not oxidize. You can heat that until doomsday and it will not take on any more. You can see it is the nature of the substance and it will not take on any more. You can heat up this black stuff and that determines whether it will or will not.

"There are all kinds of chemical reactions. Chemical reaction is when something reacts on something else. The particular kind we are going to deal with is what the chemists call 'Oxidation'; that involves the application of oxygen to some other substance, such as wood or other substances. There are different kinds of oxidations. We will consider particularly the kind of oxidation which involves the transfer of oxygen to something else."

We have a substance known as Phosphorus which will fume in the air. Here is phosphorus, if you stop to let it dry and the oxygen gets to it, it will start to fume. You can see it fume. What is happening there, when the oxygen has just taken on phosphorus? It is the unity, one with the other, giving what? Giving oxide Phosphorus. So you see a substance sometimes oxidizes readily and sometimes it will not. The nature of the substance determines whether it will oxidize or not. Another thing which will determine, is the relative amount of oxygen. I am going to show you how readily phosphorous will burn in oxygen. Let's take a little oxygen here. It is possible I might get the oxygen to ignite spontaneously. All right. Let's take a little of this—burned very readily, didn't it? The white substance is oxide of phosphorous. Another thing, it burst into a bright flame, in other words it got so hot it burst into flame and it's a very important point to remember that these oxidations are accompanied by heat. Every oxidation is accompanied by heat. If it were not accompanied by heat, but if every oxidation were accompanied by cold, the Eskimos at the North Pole would be frozen. Thus it is, by the carbon one takes into the body, the body is kept warm. This is an important fact in connection with the formation of heat by oxygen. Let's take carbon combined with oxygen two ways. It combines with oxygen to form carbon oxide or carbon monoxide, carbon 1 O or it will combine with 2 O, giving carbon dioxide. All right, what else does it give besides carbon dioxide? Anybody know? By heat, what shall we call it, heat? And instead of calling it heat, let's call it "Q". This can be made by combining with oxygen, forming what? Carbon dioxide, that's the same thing, and this one is combined to form carbon monoxide heat. Let's call it "q-1" to show it is a different amount of heat and 1 carbon dioxide forms with O-1 forms what? Q-2, another amount of heat. What this determines is oxygen subdivision is a very important factor. Subdivision is a physical property. I can take a block of wood and I can chop it up into sawdust, it is divided but it is not changed. Chemical subdivision is an effect of oxygen. For example, I can take a log of wood and take a match and have great difficulty in setting fire to that log of wood. All I have to do is cut that into shavings and you can set fire very easily.

Why Iron Will Burn

An interesting thing about subdivision is the burning of iron. It is very hard to burn, doesn't catch fire readily, until it is oxidized on the surface. Let's divide that iron in the shape of steel wool,—it burns readily. I don't know whether anybody has had to put a steel wool factory fire out or not but you see it burns readily. That's a question, I cannot tell you why. Carbon burns more readily than iron. Nobody can tell you why. That's one of the things chemists cannot tell you. There are one or two who think they can. They try to explain it by explaining that substances that burn more readily have a greater affinity for oxygen. That doesn't explain why, but we can explain, possibly, why the subdivision has an effect. We have seen that oxygen is necessary for the burning of things, consequently the more oxygen per unit of air the substance is brought into contact with, the more readily will that substance oxidize. The more oxygen per unit area of oxidizable substance, the substance is brought into contact with, the better that substance will oxidize. We will try that in case of a little oxygen. Take something—well, let's take wood here, blow it out and oxidize it and oxygen brings it into flame and it burns as you see, quite readily. This might be done with an iron bar. We have, however, to heat the iron bar up to a certain temperature before it will burn. This flame is not quite hot enough. I can show you a little more readily with steel wool to see how brightly that will burn. Quite a different effect when you have oxygen. Now I will take a piece of wood—come back to the piece of wood—the piece of wood that I took—that little splint burst into flame when it was in oxygen. The Chemist will not call it bursting out in flame, he calls it the "kindling temperature." Just what is that kindling temperature? It is the temperature at which the oxidation acts so rapidly, so strongly, it is manifested in the form of the flame. It is very rapid oxidation. It consists of reaction of one substance on something else. The kindling temperature of different substances varies. Can anybody give me an example? Can anybody tell me of an example of substances varying in kindling temperature?

Let's see. Let's take kerosene. I had a friend once who made a good fire with kerosene and it cost him $20.00;—doesn't kerosene ignite—does kerosene burn? Yes. It sure does.

Well, does gasoline burn? Let's take a little gasoline.

The ignition of kerosene is away above that of gasoline. You have seen the experiment done. The kindling temperature of kerosene is above that of a match, the kindling temperature of gasoline is below a match. Let's take something else like—we have a substance known as carbon disulphide.

I want to reiterate that kerosene does not ignite with a match; the gasoline does ignite with a match, the kindling temperature is lower than that of a match.

Ignition Temperatures of Substances

Take carbon disulphide for instance; it is a liquid known to the organic chemists. I don't think it is used much in public life. Its kindling temperature is one of the lowest kindling temperatures we know of. It will ignite very readily. This is a medium heat. Here is a substance that has a lower kindling temperature than gasoline because gasoline will not ignite on a hot-plate. This is gasoline. Gasoline will not ignite on a hot-plate. So you see there is a difference in the igniting temperature of the substances. Why should there be a difference? The Chemist thinks he can explain it to you but in reality he cannot explain very far. The chemist cannot explain it very far, he can go this far, he can say the substances that ignite readily are substances that are easily oxidized. Carbon disulphide is easily oxidized. Let's read the formula for carbon disulphide. It really is two sulphides with carbon; this burns carbon dioxide or sulphur dioxide. That occurs very readily so the kindling temperature is below. Now gasoline consists of carbon and hydrogen. The formation of this carbon dioxide by oxidizing the hydrogen is harder to do than oxidizing this, so that the kindling of this is more easily obtained. It is therefore more easily done than this. We cannot explain exactly why one oxidizes more readily than the other.

Now, I am going to pass on rather rapidly. Going to another phase of chemistry of explosions and fires, what are the factors to putting a fire out? There is just as much chemistry involved in this, in fact more than in the phase we have been discussing. Why does a substance go out when it burns? Well, it burns? It has no more oxygen and then again, the substances that are formed by oxidation, by combustion or burning, which ever you call it, those substances are not easily oxidized. They cannot be, they are already oxidized fully and they prevent further oxidation. What substances are there that prevent oxidation? Well the commonest one that you use is steam. What I mean, it is more common than some of the other things I am going to mention. Water exerts a cooling effect. It is true water requires an enormous amount of heat to raise it up to the boiling point; to convert it from the boiling point into steam requires still more heat and that heat is gained from the burning substances. Then there is the blanketing effect of steam. Steam will not support combustion.

(*Continued on page* 167)

Baked Apples But Minus the Cream

A two-alarm fire gutted the offices and storage rooms of a fruit company located in a five-story building in the food section of New York City. The blaze broke out at night. Firemen woke up the watchman and escorted him to safety.

There Is Plenty of Material in an Oil Field to Feed the Fire

In this fire in the Santa Fe Springs fields, California, damage totaling nearly $3,000,000 was done before the flames were finally extinguished. Note the number of wooden derricks as well as the large number of small tanks and shacks scattered throughout the field.

Dangerous Potentialities Always Present at Oil Fires

The Department Never Knows Just What Is Going to Happen Next—Oil Industry Produces the Most Dangerous Fires Encountered by Departments

FROM time to time suggested methods have been offered to the readers of this journal for handling specific types of oil fires. Because of the great number of different processes and types of establishments engaged in this work, it would not be possible to outline the methods of operation to be employed at all the different individual types of fires. Hence, to round out the articles which have previously appeared on this subject, the following general information is presented.

Every stage of oil production, from the oil field to the ultimate user, is fraught with severe potentialities insofar as fire is concerned.

An oil well fire may burn for a month before final extinguishment. This is particularly the case where quantities of gas under high pressure are present. In certain instances it has been necessary to tunnel from a point three or four hundred feet away in order to reach the pipe casing of an oil well beneath the ground so that the flow of oil, which feeds the fire above, could be diverted and checked. Such a method of procedure is necessary where quantities of oil are being discharged under high pressure and where it would be impossible, due to the intense heat, for the members of the department to get close enough to operate in smothering the fire or otherwise extinguishing it.

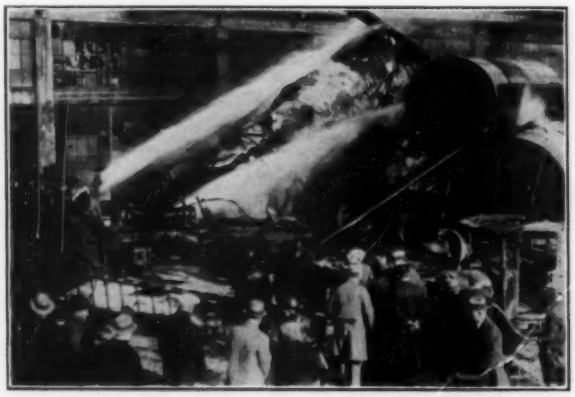
One other point which makes a fire in an oil field particularly hard to handle is the presence at almost every point of oil soaked ground, frame construction, frame sheds and other material which readily become ignited and which cause rapid spread of the fire. Furthermore there are always a number of oil tanks located throughout an oil field which in themselves present a serious hazard when fire breaks out at any of the wells.

Fires in oil tank farms are not so serious if the farms are well laid out, and if tanks are properly diked; also, where tanks are inter-connected so that the oil may be pumped from one to the other, there is a far better chance of confining the fire to the tank in which it originated.

Efficient fire prevention around oil fields is an expensive, and almost impossible task. The nature of the construction necessary, the congestion of frame derricks or other structures, and the presence of oil are conditions which, under present methods, cannot be readily remedied. Furthermore, no matter how carefully

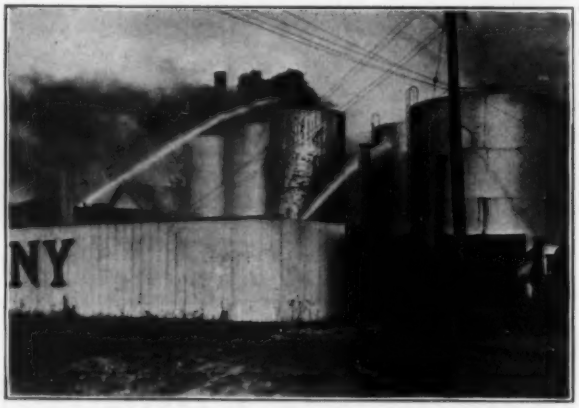
After an Eight Million Dollar Loss

At the great oil field fire at Moreni, Eastern Roumania, several oil wells burned for weeks before the fire was brought under control. It is estimated that the loss exceeded eight million dollars. The picture shows flames shooting skyward over two hundred feet. Note fire fighters in the foreground, behind shield, operating stream.



Oil Tank Explosions Have Tremendous Force

Two men died in an oil tank explosion at the plant of the Trimount Oil Company at Everett, Mass., last December. An explosion occurred in tank from which truck was being loaded with liquid asphalt.

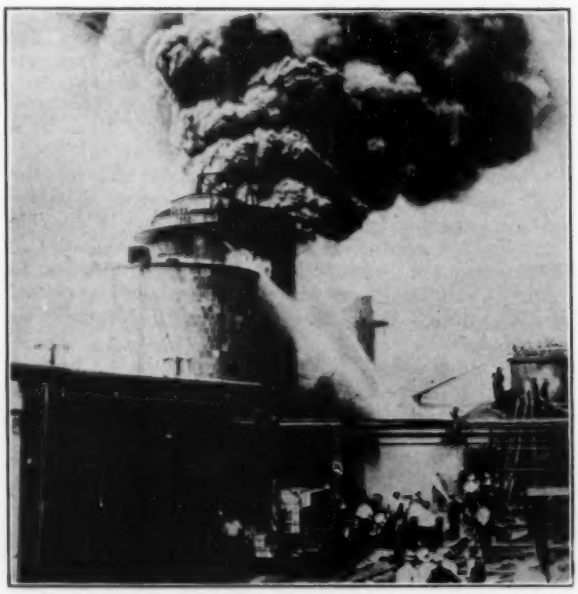


One Cause of Apprehension to the Fire Department

Placement of oil tanks near each other increases the difficulties of operating on a fire tremendously. Covering exposed tanks at this blaze, which occurred at Chicago last year, was no mean task.

Clearing Away Wreckage to Aid the Fire Fighters

Here a tractor is being employed to pull the wreckage away from burning oil well in order that the fire fighting forces may operate with maximum effectiveness.



The Still Fire is a Hard One to Control

The explosion of a crude oil tank in a nest of stills at the Standard Oil Company's plant at Canton, Maryland, last year gave the local fire department plenty of work to do. Note the truck filled with foam powder in the foreground.

an oil establishment is arranged, there is always a possibility of lightning striking and igniting some of the materials present.

Oil stills, due to the presence of heat required in operation, are responsible for a large number of oil fires. The possibility of seams opening up or stills rupturing makes operations around such fires extremely hazardous to the department, and very difficult to handle.

In this connection it may be mentioned that water streams are very necessary in operating around still fires, chiefly in covering exposures and cooling off tanks and other containers in which oil may be stored or in which fire may be burning. But in the use of water streams the ordinary precautions of preventing water from entering large oil containers of any type, such as to cause the oil to boil over or overflow, must be observed.

The advent of foam equipment has made possible the efficient operation on many types of oil fires, but foam is not a cure-all by any means. It is the most effective agent for handling oil fires, involving tanks or other large containers wherein oil is burning and where foam can be applied to the surface of the burning oil so as to smother out the fire. On the other hand, where it is not possible to reach the burning surface of the oil with the foam, the effectiveness of the foam is very much reduced. Of course it can be employed for coating exposed tanks, stills, and other equipment, but this is a secondary rather than primary use of foam.

Large Plants Impose Heavy Tasks on Firemen

Large oil companies, in order to attain the highest efficiency, frequently erect hugh plants involving a number of stills closely grouped. Such layouts impose Herculean tasks upon the fire fighting forces. Evidently the engineers who design such systems give little thought to the question of fighting fires should such occur in the establishments. They are chiefly concerned with efficiency in refining the oil, and with this point solely in mind, they develop equipment and layouts which represent, when fire breaks out, problems which none but the best of fire fighting organizations can cope with. Although in recent years more attention is being given to fire protection systems, the fact that a great number of stills are leveled annually by fire shows that the equipment is not by any means competent to handle severe fire conditions.

It behooves the chief who has such properties in his territory to give serious thought to the exact methods which would be followed in combating fire, if such breaks out.

Hazard of Explosions in Tanks, Stills, Etc.

One of the dangers which experienced fire fighters apprehend in connection with oil fires, and particularly around stills, is the explosion of tanks, stills, or other containers. Such explosions may result in the release of large quantities of highly inflammable oils, and thus create a very severe life hazard as well as fire hazard. Officers in charge of men must always be on the alert to apprehend such a happening and must at all times have definitely in mind a path of retreat to safety so that there will be no confusion in the event that men are forced to flee from onrushing fire.

Occasionally where such explosions occur, a large amount of debris is strewn around the burning section, and damaged equipment is so distributed as to hinder the operations of the department. Occasionally the situation can be eased up, and the ground cleared for action, such as in the case of oil field properties, by the use of tractors or other towing equipment. This equipment serves in very much the same manner as the pull-down hooks employed in ordinary fires for removing debris. The chief difference is that the pull-down hook is operated by manual force rather than by power.

Insofar as oil fires in industrial sections of cities are concerned, these fires in the majority of cases involve containers filled with refined products such as gasoline, petroleum, and other petroleum products. Due to the comparatively high cost of land, such tanks may be grouped close together. When fire breaks out in one of the tanks the department has to do some mighty fast and thorough work covering exposures and cooling down exposed tanks in order to confine the fire to the tanks already involved.

To sum up, oil property fires represent the most serious type of fires commonly encountered by fire departments. The potential hazards are extreme. The dagner in the event of tanks letting go is ever present.

Water is of little use in actually extinguishing the fire, but is of tremendous value in cooling down exposed equipment.

The Oil Fire Works Fast

At this blaze in Detroit so quickly did the fire travel that it was impossible to get the truck shown in the center of the photograph away from the flames before they had enveloped it. The loss at this fire was estimated at over $100,000.

Foam apparatus is very effectvie for operating on fires involving containers where the foam can be spread over the burning surface of oil. Foam can also be used for coating exposed surfaces although in this operation it does not serve its prime function of extinguishing fire. Steam squipment, where available, and provided with sufficient steam capacity, is very effective for smothering fire. However, there is always a chance of the steam supply being limited, and in the event that an explosion occurs within a tank, and the tank opens up, steam will be of little use due to the fact that it cannot be confined over the burning surface of oil. Carbon dioxide gas is coming into use to a small extent in handling oil fires, but here again it is a question of keeping the gas confined over the burning surface of the oil in order to extinguish the fire.

Alertness is the by-word in operating at oil fires. Safety of men, as well as efficient operation in holding the fire depends upon it.

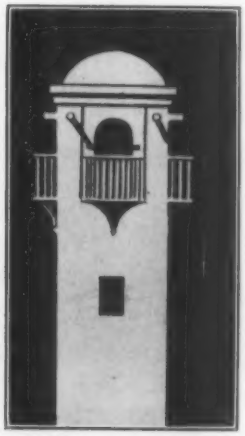
To Aid in City Beautification, Consider

Fire Stations in Modern Dress

By N. N. WOLPERT

ONE interested in fire department matters has just cause to wonder if Kipling had a fireman in mind when he wrote his famous lines:

It's Tommy this, and Tommy that
And Tommy all the day
But it's Mr. Thomas Atkins
When the band begins to play.



Novel Treatment of Hose Tower

For when it comes to the public's attitude toward the department, the little rhyme is applicable.

A striking example is the fire station. There are always delegations anxious to appear before the city council to urge the erection of a fire station in some particular locality in order to better protect a district that has recently developed, and of course, to receive any possible benefit from a reduction in fire insurance premiums. Newspapers take up the hue and cry that the city should be better protected. When the issue can no longer be sidetracked, possibly a bond issue is passed for the construction of new stations, the purchase of apparatus and the enlargement of the department. The civic workers are satisfied. United effort was responsible for another victory.

But when it is suggested that the new station be erected on vacant land near John Uplift who was an aggressive worker for the improvement, heaven forbid! Mr. Uplift, so he states, has no personal objection to a fireman as a neighbor, and he is eager to explain that some of his best friends are firemen, but then one must consider the children and the noise that the apparatus makes at all hours, going and returning from a fire.

He is most anxious to point out that a piece of property about five blocks or so away is a much more desirable location. It is closer to two main highways, the running time to many points will therefore be less. And when the committee in order to get the improvement started attempts to secure the land as a possible site for the fire station, a new faction of objectors spring up. The underlying reason for so much opposition is that in the residential areas property owners near the contemplated site are afraid that their property value will be depreciated, and in the trading area, merchants are dubious about the reaction it will have on business.

Perhaps there is some justification for such arguments. No one cares to be located in an attractive home or building and then have as a neighbor, a monstrosity that is reminiscent of horse-drawn apparatus, red-shirted firemen and a "Smith Brothers" type of fire chief.

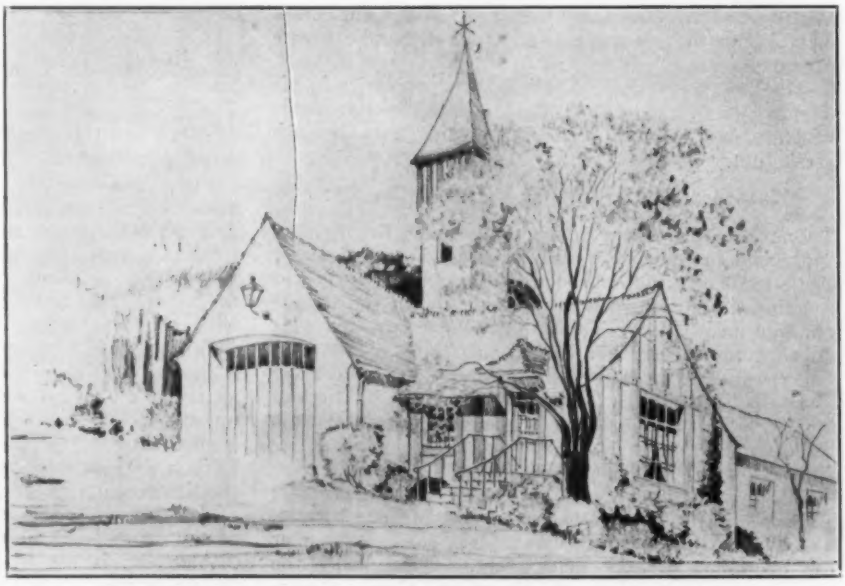
Growing opposition made it necessary to take revolutionary steps. The tendency has been in recent years to adapt the fire house to modern dress. The change has been so marked, and benefits so pronounced in a program of beautifying a city, that it will be only a matter of time before the movement will take hold in every municipality of any size. It is very much akin to the movement started in 1910 for motorization of apparatus.

Several cities have accomplished a great deal to attain this objective. The latest crusader in this field has been the Department of the County Architect, County of Los Angeles. A number of interesting designs have been developed in this department to remove the conventional fire building lines and have it blend in with the architecture of the neighborhood.

Such designs while not difficult, call for considerable ingenuity and for some pioneering.

The Hollywood-Sherman station is an example of how attractive a district fire house can be. It is designed to house ten men in addition to the apparatus.

The house is one story high of masonry construction. It measures thirty-three by eighty-six and one-half feet.



The Hollywood-Sherman Station Follows English-Norman Lines

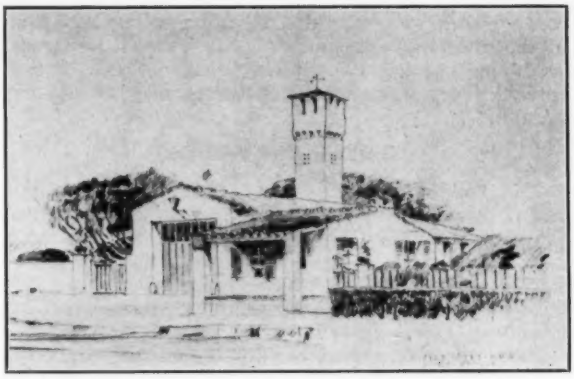
The house is half timbered and the other portion is of common face brick, white-washed to accentuate English-Norman design. The half timbering material is worked up in the design with bolts and wood plugs, and between the timbering, pattern brick is laid.

The main entrance doors are heavy slab "V" joint type with automatic folding door equipment.

The windows are designed to conform to the style of the building by being of leaded glass of casement type The roof is covered with asbestos shingles.

Plans were made so that there is a side driveway and a yard in the rear for cleaning and drying apparatus and hose, and for the storage of material and equipment. In addition to the large room for the apparatus, there is a dormitory for ten men, a recreation room, locker rooms, a bath and a kitchen.

When viewed from the front, a passer-by would never believe it is a fire house.



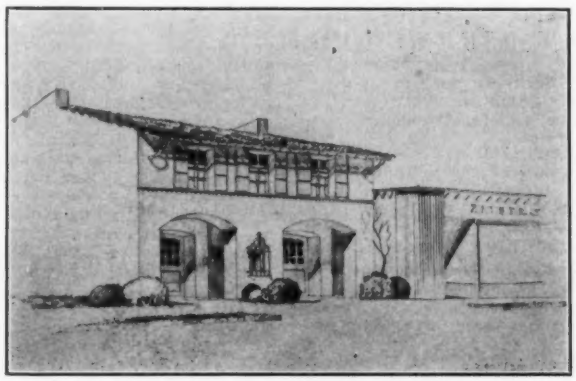
The Belvedere Station is of Spanish Design

Belvedere Fire Station

A front Loggia constructed of heavy timber lintels and exposed beams and rafters help to differentiate the Belvedere fire station from the one previously described. This house is thirty-two by seventy-six feet, of one story masonry construction and of Spanish design.

The building is sectioned to contain one apparatus room, a dormitory for eight men, an office, baths, kitchen, recreation room and a hose tower for drying hose. The apparatus room is ceiled with wood and supported by heavy wood trusses.

The doors are of the heavy slab type and stained dark. The exterior walls are of whitewashed brick. The main roof and tower are roofed with hand-made terra cotta tile although the roof is not quite as peaked as the Hollywood-Sherman station. When framed with shrubbery and foliage, the station is most attractive.



Florence Fire Station Erected in Business District

Florence Fire Station

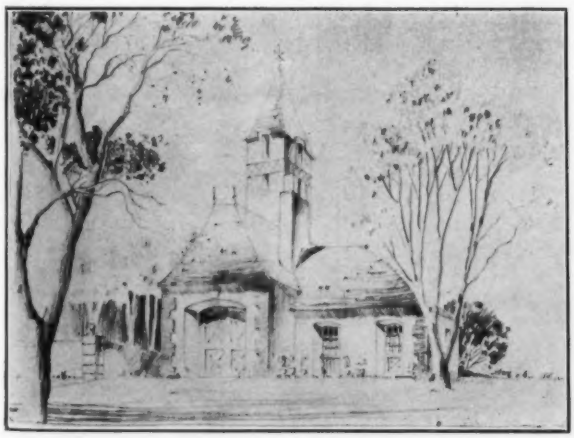
Because of its location in the business district, it was necessary to design a two-story building for the Florence station. The front or street elevation is the principal facade, and it has been planned according to modified Spanish lines.

It is a masonry structure that measures forty by fifty-eight feet. On the street front there are two large wooden doors to the apparatus room. Windows are trimmed with wood shutters and ornamental wrought iron grilles and flower pot holders. Under the second story windows, an ornamental brick and Padre tile belt course is constructed.

The entire first floor is used for the apparatus room. The second floor is divided to form a captain's room, dormitory for twelve men, recreation rooms, baths, lockers, and so forth. At the rear of the building is located a hose tower. Being in a business district, the company has to protect greater property values, and so several pieces of apparatus can find housing space. There are also provisions for more firemen.

The roof is laid with hand-made Spanish terra cotta tile.

It is interesting to note that while in the residential district, the architect tried to break up the straight lines of the conventional fire house, in the business district, station, the aim of the designer was more to dress up the building than to conceal the fact that the structure was a fire station.



Graham Fire Station

Flintridge Fire Station

This station, not illustrated, is forty-nine feet wide and fifty feet long. It houses a single piece of apparatus and has a dormitory for six firemen. It has, in addition, a recreation room, kitchen, locker and bath rooms, and a tower for drying hose.

The building is of one-story, masonry construction, with exterior walls of whitewashed common brick, and the roof covered with hand-made terra cotta tile.

The house was designed along Spanish lines with trimmings of Padre tile and wood shutters and grilles at windows. The main apparatus room openings have large "V" joint slab doors. The interior of the room is decorated with heavy timber trusses and a ceiling

covered wtih grooved wood sheathing. The treatment of the tower is interesting. It has a round dome and small openings near the top with balcony effects. It is as foreign from drying tower design as one can possibly make it.

Graham Fire Station

This building is a duplicate of the Belvedere station and is thirty-two by seventy-six feet, of one story masonry construction. These two stations are illustrated.

The drawings and the description of the various fire stations erected in Los Angeles County were furnished through the courtesy of Karl W. Muck, architect, County of Los Angeles.

Everywhere one hears the cry for modern dress. It is a toning up of conditions to the present fast moving tempo, an answer to the everlasting demand for getting away from the drab, and for making objects more attractive by the introduction of color.

The old red brick joisted department building and the frame barn-like fire station are fast becoming obsolete. They have failed to comply with the demand for modern dress.

SOUTHERN CALIFORNIA CHIEFS ENDORSE I. A. F. C. FIRE SCHOOL

Bi-Annual Convention Held at Avalon, Catalina Island—Chief Ralph J. Scott and Other Well Known Chiefs Attend

THE question of a fire college and fire school had a prominent part in the program of the bi-annual convention of the Southern California Fire Chiefs' Club held at Avalon, Catalina Island. When the party landed at the island, it was met by the Avalon Band, the American Legion Drum Corps, officials of the city, and Chief Sullivan.

The meeting was opened by President W. J. Mohr. Chief Ralph J. Scott of Los Angeles, President of the I. A. F. C., said that he had no fault to find with the accomplishments of the International nor the Pacific Coast Association, but that it was his idea to do great things during the present year, with the help of several men.

He said that the first thing to be done would be to start an educational campaign to embrace all district organizations. As a start in this work, Chief Scott mentioned the three-day meeting of the chiefs held at the Los Angeles Fire College. He spoke on the attempt of the National Fire Waste Council to inaugurate fire colleges which would give only a five day's course of five hours a day and against relying upon college professors who had no actual fire department experience to determine who should serve as chief at the conclusion of these short courses. Chief Scott also rapped private agencies for fire prevention and protection who are seeking to commercialize fire department activities.

Chief Scott invited members of the association to make use of the Los Angeles Fire College which gives a course lasting ninety days. No charge will be made for the course, and the men attending will be housed free.

When called on for some comments, Chief E. F. Coop, President of Pacific Coast Association, stated that it was a proud moment for him when he received the banner at Birmingham, Ala., for the section that had made the greatest strides. Chief Coop told about the Pacific Coast Association and the plans made for the coming convention in Oakland, August 26-29.

At the conclusion of these remarks, John Colton, Board of Underwriters of the Pacific, read a paper on "The Quad —Its Value and Limitations." The Quad is a 1,000-gallon pumper carrying 360 feet of ladders, 1,500 feet of 2½-inch hose, 500 feet of 1½-inch hose and 200 feet of 1-inch hose.

Chief H. M. Topping, Whittier, presented a paper on "The Problems of Volunteer and Part-Paid Departments."

Chief J. H. Carroll, Bell, read a paper on "Cooperation of Insurance Companies."

Considerable discussion followed the last paper, and several of the chiefs and representatives present told of experiences that they had had.

A suggestion was made that a resolution be sent to the National Board of Fire Underwriters requesting that the so-called "Red Book" or Fire Engine Tests and Fire Stream Tables be brought up to date.

Captain Myer of the Los Angeles Fire Department and President of the California Firemen's Association was present and made a few remarks.

Chief Norman Johnson of the Los Angeles County Fire Department presented the following resolution:

"Resolved, that this organization, the Southern California Fire Chief's Club, go on record as protesting any campaign for the benefit of any fire department which may be put on by any company, organization, or any person or persons who are not connected directly with the fire department, which in any way will benefit such company, organization or any person or persons financially or otherwise, and such resolution be printed or published as far as possible in every local newspaper in Southern California."

The resolution was adopted.

Chief Frank B. Wilcox, of Culver City, was unanimously elected President as were the following officers: Chief C. E. Sullivan, Avalon, Vice-President; Chief G. E. Zimmerman, Coronado, Secretary-Treasurer.

Huntington Park was selected as the place for the next bi-annual convention.

The ladies were taken on several sightseeing trips about the island and on one evening, there was a banquet followed by dancing.

Lowe, Assistant Chief of Lynchburg

H. N. Lowe, since April 22, 1929, acting chief and acting captain of Station No. 3, Lynchburg, Va., has been promoted to Assistant Chief of the Fire Department. He attended the New York Fire College last spring, and upon his return initiated several improvements in the local department. He has started a schedule of drills to keep his men in proper training.

Centerbrook, Conn., May Erect House—Funds are being raised in Centerbrook, Conn., for the erection of a new fire station.

St. Marys, O., Considers Community Apparatus—The American Legion post in St. Marys, Ohio, is backing the project to purchase apparatus for the protection of the rural community.

Chiefs and Guests at the Bi-Annual Convention of the Southern California Fire Chiefs' Club, Avalon, Catalina Island.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

HUNDREDS of persons gazed in wonder on the story being unfolded on the motion picture screen. There is a fire. Some one is caught on an upper story. She threatens to jump but those below shout that she should wait while a ladder is being raised. Within a short time, a ladder is placed in position, but it fails to reach. The flames are coming closer and closer. A fireman rushes up the ladder with a Pompier ladder, and by careful manipulation and a dizzy, swaying ascent, reaches the fair maiden. Claude, the fire hero, can always be depended upon when attractive blondes are to be saved.

But in actual fire department practice, the value of a Pompier ladder in saving life has been questioned, and even the value of Pompier ladder drills. It has been claimed that it is difficult enough to try to climb or descend a swaying Pompier ladder, without having the responsibility of carrying down another person.

The question in full is printed in the box on this page. In the box on the following page is the problem that will be discussed in the next issue. Should you have some comment on the next problem or if you have a question that you would like to see treated in this department, write to the "Round Table Editor," FIRE ENGINEERING, 225 W. 34th St., New York, N. Y.

HERE IS THE PROBLEM

Do you consider Pompier ladder drills and Pompier ladder work really worth while in the modern fire department?

Do you ever use Pompier ladders in fire fighting and life-saving operations?

Have lives ever been saved by their use in your department?

The Question

While many chiefs believe in the value of Pompier ladders in instilling confidence in the men, a few are opposed to using such ladders. However, few of the chiefs in the larger cities report that it has been the means of saving life. The replies received follow:

J. T. McNulty, Chief, St. Petersburg, Fla.: I consider Pompier ladder drills very essential. By using Pompier ladders on the drill tower, a confidence, which is very necessary, is instilled into the men. This confidence and efficiency cannot be obtained in other ladder work due to positions in which he is placed in climbing from window to window. A fireman who can master the use of Pompier ladder work is fully competent to do any kind of ladder work and I am fully convinced that every drill school should, by all means, train their students in the use of Pompier ladders.

We sometimes use Pompier ladders in fire fighting, but have never had occasion to use them in rescue work.

James M. Casey, Chief, Cambridge, Mass.: I consider Pompier ladder drills necessary as they give new members great courage to climb the regular ladders at a fire. By being compelled to climb the Pompier ladder at drills, any timidity which new men may have about climbing seventy-five or eighty-five foot ladders at fires is overcome.

Pompier ladders have never been used in our department as we have no drill tower, but I have asked for one, and when granted same, will inaugurate suitable drills.

M. E. Clark, Chief, Williamsport, Pa.: I do not consider a fire department modern if Pompier ladder drills are not a part of the routine. And I believe this to be especially true in the case of smaller departments where there is most always a shortage of ladders.

On several occasions Pompier ladders have been used in our department for both fire-fighting and life-saving.

Apparatus is certainly not complete without at least one such ladder and proves its value many times, for instance, in the case of raising a nextension ladder where it is found to be short of the point desired to be reached.

Edward F. Dahill, Chief, New Bedford, Mass.: Pompier ladders have never been used in this department. I have witnessed many exhibition drills of Pompier ladder work and believe they help to make better firemen.

About two years ago in company with District Chief Williams of Lynn, Mass., I witnessed an exhibition drill at the fire school in Florence, Italy. The firemen scaled a 70-foot drill tower faster and with greater ease than I have ever seen elsewhere. They use light scaling ladders instead of the single stick Pompier ladder that are used in this country and the scaling ladder appeared to me to be lighter, faster and safer.

L. B. Rapp, Chief, Lynchburg, Va.: Yes, I consider Pompier ladder drills really worth while in the modern fire department, and the occasion often arises where the results of such drills prove beneficial.

We have used Pompier ladders both in fire fighting and life saving. They were used a few years back to save the lives of two elderly persons who were trapped on one of the upper floors of a boarding house.

Cris W. Noll, Chief, Poughkeepsie, N. Y.: Although the Pompier ladder might not be commonly used in fire fighting operations, I believe they are good for training as they give the men a certain amount of confidence which they cannot get otherwise. We had occasion to use one recently in ventilating a building, and the work was handled much quicker and with more ease than it could have been done with another ladder.

Holly G. Painter, Chief, Kent, Ohio: We, at present are not equipped with Pompier ladders, but expect to procure such for our service truck in the near future. I believe them to be of considerable value in the training of firemen.

Ira A. Tedder, Chief, San Benito, Tex.: Your question "Do you consider Pompier ladder drills and Pompier ladder work really worth while in the modern fire department?" does not take into consideration the smaller cities who have only the 20-foot extension ladders, but have modern equipment. In the case of these departments I believe the Pompier ladder to be a valuable piece of equipment both for fire duty and drill work. In the larger fully equipped departments its greatest value lies in its use in drill work.

I have used Pompier ladders in fire fighting and life saving operations to good advantage.

D. W. Flynn, Chief, Great Barrington, Mass.: I consider drill and ladder work on Pompier ladders very important in fire departments. If the men are not trained in the use of such, they will be unable to render aid should an emergency arise where the proper handling of the Pompier is the vital link between failure and success.

As we have no buildings over five stories in height, we do not use the Pompier ladder in fire fighting operations, the regular fire department extension ladders having served our needs to the present time.

R. Chrisman, Chief, Roswell, N. M.: I believe Pompier ladders are necessary and useful to the fire department, and figure them indispensable insofar as ladder equipment is concerned. For drill purposes I think they provide one of the best exercises obtainable for the men.

James Black, Chief, Grand Forks, N. Dak.: I do consider Pompier ladder drills and ladder work really worth while, and am sorry to say that at present we have no drill tower, but hope to have one erected in the city soon.

We use Pompier ladders when an occasion arises requiring their use. They have been used by this department for life saving in connection with life line in rescuing guests from a hotel building.

C. E. Carlson, Chief, Tacoma, Wash.: Pompier ladders may be used in drills on drill towers, for the exercise, experience and confidence they provide in ladder climbing. I do not believe them to be worth while in actual fire fighting.

Pompier ladders are carried on our ladder trucks, but have had no occasion to use them in fire fighting. Not having employed such ladders as just stated, we have of course saved no lives by this means.

HERE IS THE PROBLEM FOR THE NEXT ISSUE

How do you handle telephone or still alarms?

Also, how do you handle alarms received from central stations?

Geo. A. Philbrook, Chief, Middleboro, Mass.: I consider drills employing the Pompier ladder to be especially valuable to the fire department, and when we get a drill tower, we shall surely have them. Driling with this type of ladder, to my way of thinking, instills confidence in a man and is a gauge whereby he can judge if his courage is still with him as he grows older.

Our equipment does not include Pompier ladders at the present time, as the type of building on which the Pompier ladders may be used to advantage are too few in this city.

Allen E. Nice, Chief, Columbus, Ohio: As we are not equipped with a drill tower or Pompier ladders, my experience in the use of same is limited to observations. I do consider Pompier ladder drills and the use of them in the modern fire department especially valuable if the men are properly trained.

Henry R. Taft, Chief, Norwich, Conn.: My opinion is that Pompier ladder drills, and Pompier ladder work are very essential in the modern fire department.

While my present equipment does not include Pompier ladders, I consider them to be a most valuable piece of equipment in life saving operations and believe they will prove their worth in many emergencies.

Elmer J. Brown, Chief, Binghamton, N. Y.: I consider Pompier ladder drills and Pompier ladder work most essential in the modern fire department. It is my opinion that such drills during the training period tend to give the men greater confidence in themselves besides being a wonderful form of experience.

The members of this department are all trained in their use, and we would not hesitate to use them, if the occasion required.

Peter V. Hoy, Chief, Norristown, Pa.: I believe Pompier ladder drills and Pompier ladder work to be worth while, provided you have a regular crew to handle them.

We are equipped with this type of ladder, but never have had an occasion to use them for life saving purposes.

J. F. Donovan, Chief, Meriden, Conn.: We use Pompier ladders on our drill tower, as it tends to give the men confidence in climbing. The occasion may arise when our present forty or sixty foot ladders would not reach a desired location, and, in such instance the Pompier ladder will prove valuable.

We carry two ladders with life belts on our service truck. To date, we have not employed the Pompier in life saving operations.

Frank W. Fuller, Chief, Brainerd, Minn.: We have no buildings in our city that require the use of Pompier ladders and therefore do not employ the Pompier ladder drills.

From observations I would say, however, that such ladders and drills are necessary in the larger cities. If an emergency is to be properly handled, intelligent preparation or rather training of men is a necessity.

G. W. Searles, Chief, Pana, Ill.: I consider Pompier ladder drills essential for the fire department. Unless such drills are conducted regularly, valuable time is apt to be lost at fires, due to the men being sluggish in the handling and scaling of these ladders.

Pompier ladders have not as yet been employed by this department in life saving operations.

A. B. Canfield, Chief, Pocatello, Idaho: I consider Pompier ladder drills very essential to the modern fire department. These drills have a tendency to give the members confidence in themselves as well as in each other.

We do not employ Pompier ladders in fire fighting or life saving operations.

M. S. Phillips, Chief, Chicago Heights, Ill.: As our department is not equipped with Pompier ladders, I hesitate to offer an opinion, but would consider them of value in drill work. To say the least, they instill confidence in the men.

L. J. Urbanski, Chief, Saint Joseph, Mo.: Pompier ladders are essential to the modern fire department, and members thereof should be acquainted with them through drills.

Before Pompier ladders were procured for our department, on occasion arose during operations at a 9-story hotel fire where we could have made good use of them in getting several trapped people off the top floors. But, since being equipped with this type of ladder, we never had opportunity to employ them in fire fighting operations.

B. J. Reilly, Chief, Ithaca, N. Y.: We are not at present equipped with Pompier ladders, and to date, their use has not seemed necessary. However, we are inclined to believe that the use of Pompier ladders and drills involving same would be of great value in the larger city departments.

It seems to us that Pompier work, in the small and medium sized cities, is stressed to the disadvantage of fundamentals and everyday work.

W. E. Ringold, Chief, Pendleton, Oregon: Pompier ladder drills are certainly worth while, for they give confidence to the men and strengthen their body muscles.

We have employed the Pompier ladder in gaining entrance to buildings instead of breaking down doors for this purpose, thus reducing property damage. This type ladder has not as yet been employed by this department in life saving work.

Fred. Baumgarten, Chief, Lake Charles, La.: Whether the fire department be large or small, I think that Pompier ladders and Pompier drills should be used. Should the occasion arise when you wish to reach a certain window possibly out of reach of your available regular ladder equipment, no time need be lost in carrying out such an order.

(*Continued on page* 163)

WITH THE EDITOR

Naming Fire Boats After Fire Officers

In this issue is told the story of the beginning of public service of the "John Kendall," Detroit's new fireboat, named for the late chief of that department who served his city with distinction for forty-two years. Other fireboats in Detroit are named in memory of its gone but not forgotten fire commanders. Boston, Mass., has named its fireboats for its soldier-firemen martyrs of the World War. Other cities have done likewise.

New York City has ten fireboats. Excepting the New Yorker and the Zophar Mills, they are named in mem ory of Mayors, four out of eight having served the metropolis before the paid fire department was organized in 1865. Suggestion has been advanced to stop this practice, and instead, name fireboats for fire chiefs in order to perpetuate the memory of the fire fighter rather than the politician. One of New York City's modern fireboats, the Thomas Willett, is named for a man who served as Mayor 200 years before the present fire department was organized.

Albert Goldman, Commissioner of the New York City Department of Plant and Structures, which maintains the ferry and bridge service, recently wrote to a score of politicians in the metropolis and shamed them into consenting to the elimination of their names from city ferry boats to be renamed for old communities, towns, villages and neighborhoods that now form part of the consolidated City of New York.

While it is sentimentally appropriate to perpetuate the memory of distinguished public officials and it is an honor deserved by faithful public service, why pick on fireboats, when there are so many parks, playgrounds, public squares, boulevards and numerous other subjects more general in the public mind? Keep the names of fireboats within the fire-fighting profession. They would then really mean something.

A Blow at Civil Service in the Fire Department

Last year the Legislature of Minnesota passed a Firemen's Civil Service Law applicable to cities and villages of the second, third and fourth classes. Among the cities to take advantage of the law was Eveleth, which adopted civil service for its firemen, under the instruction of the Civil Service Commission. However, on November 5, 1929, a new city council was elected, and it at once voted to rescind the civil service rules on the ground that they are unconstitutional, and ousted the present Chief from office.

The matter was carried before the State Supreme Court, and a temporary injunction was obtained, restraining the City Council of Eveleth from removing the chief from office and placing another man in his place.

The decision of this case will mean much to the firemen of Minnesota. For upon it will rest the constitutionality or otherwise of the law placing the cities of Minnesota other than first class under the civil service law.

If this case is decided against the law, it will throw the fire departments involved wide open to sinister political influences and will completely remove the safeguards against this most unfortunate condition, which has been the undoing of so many fire departments throughout the country.

This is only another instance, which emphasizes the necessity for the exercise of eternal vigilance, in order to keep the fire department free from the machinations of politicians and the greed of would be office holders.

"Locking the Stable Door" by City Council

Another case of "Locking the stable door after the horse has been stolen," has been brought to light by an item of news in a small city daily. This item reads:

"With a grim reminder of the devastation of fire fresh in their minds, members of the —— city council without a dissenting voice expended upwards of $500 for more fire equipment at their regular meeting Tuesday evening. Upon the recommendation of Fire Chief —— ——, an order was placed for 500 feet of two and one-half inch fire hose, two nozzles with minor fixtures, and a gas mask with smoke and ammonia canisters.

"Inclusion of the gas mask was urged by Chief —— who pointed out the difficulty of entering quarters closely filled with smoke such as were encountered at the —— —— fire, and the one recently at the —— home."

If the equipment mentioned had been in the hands of the Fire Department before the fires mentioned occurred, probably there would have been much less property damage as a result, and the small expenditures would have been justified by the result.

This is by no means, sad to say, an unusual case. Only too often the recommendations of the Chief of the Fire Department are either ignored or else action on them is postponed until too late, as in the present case. It seems incredible, and yet numerous examples prove it true, that the powers-that-be in city and village government are apt to treat lightly the warnings of the one man who should and does know what is best for the city in the matter of fire protection and facilities for

fighting fire. These officials fail to recognize that such recommendations are the result of careful study on the part of an expert in such matters and by no means are mere haphazard opinions expressed on the spur of the moment or in order to force expenditures by the City Council.

If the Chief is worthy to hold his job, then his judgment should be supreme in all matters connected with the Fire Department, its work and the guarding of the city and its citizens from fire. To procrastinate in such matters is to invite sure disaster, as in the case of the city mentioned in the news dispatch.

FIRE BOAT "JOHN KENDALL" TESTED BY DETROIT F. D.

Craft Designed to Act as Ice Crusher—Will Be Equipped with Radio at Later Date—Specifications of Latest Fire Boat

By WM. JEROME DALY

THE "John Kendall," Detroit's new fire boat, was placed in service last week, relieving the "James Battle" as Engine Co. 16, and the Battle relieved the "James Elliott" as Engine Co. 25—the Elliott going to dry dock for overhauling. It will then he held in reserve.

The Kendall was named for the third chief of the Detroit

Officials at Test of "John Kendall"

Left to right, Com. Charles F. Clippert, Hon. Charles Bowles, mayor of Detroit; Governor Fred W. Green of Michigan, Chief Stephen C. Demay, Com. C. Hayward Murphy and Com. George W. Trendle.

Fire Department. He served from June 27, 1865, to January 1, 1907, when he retired. He died July 6, 1921.

The advent of the Kendall into the fire service of the motor capital of the world was attended with pomp and ceremony and by Gov. Green of Michigan, Mayor Bowles of Detroit, members of the Board of Fire Commissioners, Chief Stephen De May of the Detroit Fire Department, Chief Edward Rumsey in charge of apparatus, shops and properties and several others of lesser rank. They were all on the first official trip of the fire tug up the Detroit River into Lake St. Clair where the Kendall successfully crushed twelve inches of ice. Detroit fireboats have to be ice-breakers, and the Kendall proved true to this task under a speed of six knots. Then she was backed full speed into the ice cakes to test her stearing gear and she performed most successfully, with Commissioner C. Hayward Murphy at the wheel. Mr. Murphy is a navigator and saw service as Lieutenant Commander in charge of mine sweepers during the world war.

The day of the official trial the temperature was seventeen degrees. On the way back a novel experiment was tried. While the vessel was still in the throes of the ice the main engines were stopped; the boat's headway was "killed" and the stern gun atop the tower-mast was equipped with a four and a half inch tip, directed straight astern. The full power of the pumps was used and the back-thrust from this discharge was enough to send the boat ahead at about four or five knots. Commissioner Murphy was at the helm for this stunt also and was able to steer just the same as if the propeller had been doing its work. The boat will soon be equipped with radio—the plans for the installation being incomplete at this writing. The accompanying photographs were made by Lieut. George Smith, arson squad detective and official photographer for the department.

The "John Kendall" was designed by Dean Herbert C. Sadler, Professor of Naval Architecture at the University of Michigan, and built by the Toledo Ship Building Company, of Toledo, Ohio.

She is 135 feet overall, 29 feet beam, 15 feet 6 inches moulded depth, and 125 feet between perpendiculars; built entirely of steel with an ice crushing bow and a cruiser stern. The propelling engine is a 950 I.H.P., fore and aft compound condensing type, built by the Toledo Ship Building Company, size 18 inches and 36 inches, with a 27 inch stroke, turning a nine foot four bladed propeller 160 R.P.M., giving a speed of 16 miles per hour.

The deck equipment consists of 2 steam capstans, towing bitts, 2-14 foot metal life boats equipped with outboard motors, 1-750 pound and 1-400 pound stockless anchors. Something new in fire boat construction has been embodied in that all railings, turret nozzles, gates handles, etc., have been chromium plated.

The fire pumping equipment consists of two 12-inch, four-stage Manistee Roturbo centrifugal pumps, guaranteed to deliver 5000 g.p.m., at 200 pounds pump pressure when running at 1700 r.p.m., and 2500 g.p.m., at 300 pounds pump pressure when running at 1940 r.p.m., each direct connected to a General Electric, 800 h.p., type D-50, five-stage steam turbine. There are also two 6-inch, four-stage Manistee Roturbo centrifugal pumps each capable of delivering 500 g.p.m., at 200 pounds pump pressure when running at 2000 r.p.m. These pumps are direct connected to General Electric, type D-54, two-stage turbines.

At the acceptance tests the large pumps exceeded their guaranteed delivery by pumping:

12125 g.p.m. at 150 pounds pump pressure
10640 g.p.m. at 200 pounds pump pressure
5747 g.p.m. at 300 pounds pump pressure

The small pumps exceeded their guaranteed delivery by pumping:

1585 g.p.m. at 150 pounds pump pressure
1229 g.p.m. at 200 pounds pump pressure
816 g.p.m. at 300 pounds pump pressure

The pumps discharge into a well gated 12-inch loop forward and an eight-inch loop aft, to which are connected by risers the sixteen 3-inch gate valves located on the deck house, eight at the forward end and eight at the after end, also to the five-6500 gal. Morse Invincible Turret Nozzles, each equipped with 4½-4-3½-3-2½-2-and 1½ inch tips, are located: two on the roof of the pilot house, two on the

Fire Boat "John Kendall," of Detroit Fire Department

after end of the deck house, and one on a tower on the after deck thirty feet above the water line. These are all controlled by horizontal valves located below deck, with stems rising through operating platforms at base of nozzles. Ross valves and flow meters are provided in the main piping.

(*Continued on page* 164)

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Vacations in Fire Departments

To the Editor:

Will you please advise me as to the number of days allowed as "vacation" days in paid fire departments of medium-sized cities? Such data as you may have on departments in the East would be best suited for this department in making comparisons.

Yours respectfully,

K. F. P.

Answer: Below is given a list of cities such as you refer to, and the vacation periods allowed by them:

City	Days Vacation	City	Days Vacation
St. Joseph, Mo.	15	Jackson, Mich.	20
Manchester, N. H.	14	Topeka, Kans.	14
Passaic, N. J.	15	New Castle, Pa.	14
Terre Haute, Ind.	14	Lancaster, Pa.	7
Hamtramck, Mich.	20	E. Chicago, Ind.	15
Portland, Me.	16	Bay City, Mich.	10
Hoboken, N. J.	16	Lima, Ohio	6
Pawtucket, R. I.	10	Haverhill, Mass.	14
Troy, N. Y.	15	Hammond, Ind.	15
Charleston, S. C.	10	Greensboro, N. C.	10
Wheeling, W. Va.	15	Clifton, N. J.	14
Johnstown, Pa.	14	Chelsea, Mass.	16
Union City, N. J.	16	Lexington, Ky.	10
New Britain, Conn.	7	Montgomery, Ala.	10
Niagara Falls, N. Y.	14	Battle Creek, Mich.	15
Racine, Wis.	15	So. Vancouver, B. C.	14
Springfield, Ill.	15	Superior, Wis.	14
Davenport, Ia.	15	Ogden, Utah	10
Springfield, Mo.	14	Moline, Ill.	15
Pueblo, Colo.	14	Ft. Smith, Ark.	10
Wichita Falls, Tex.	..	Fitchburg, Mass.	14
Malden, Mass.	14	Dubuque, Iowa	15
Newton, Mass.	14	Muskegon, Mich.	—
Cedar Rapids, Ia.	15	Chicopee, Mass.	14
Charleston, W. Va.	10	West New York, N. J.	16
Hamilton, Ohio	10	Santa Monica, Cal.	15
Columbia, S. C.	15	Warren, Ohio	14
Butte, Mont.	14	E. Cleveland, Ohio	14
Elmira, N. Y.	14	Muskogee, Okla.	14
Jamestown, N. Y.	15	Meridian, Conn.	14
Stamford, Conn.	10	Poughkeepsie, N. Y.	15
Lorain, Ohio	14	Taunton, Mass.	14
McKeesport, Pa.	14	Raleigh, N. C.	10
Asheville, N. C.	10	Mansfield, Ohio	14
Phoenix, Ariz.	15	Everett, Wash.	15
Joliet, Ill.	15	Alameda, Cal.	15
Lincoln, Neb.	14	Quincy, Ill.	10
Glendale, Cal.	15	Jackson, Miss.	..
Calgary, Alb., Can.	14	Danville, Ill.	15
Edmonton, Alb., Can.	14	Petersburg, Va.	15
London, Ont., Can.	14	Oshkosh, Wis.	10
Brockton, Mass.	14	Waterloo, Ia.	14
Covington, Ky.	14	Lewiston, Me.	14
Shreveport, La.	12	Easton, Pa.	10
San Jose, Cal.	14	Steubenville, Ohio	15
Holyoke, Mass.	14	Regina, Sask.	14
Windsor, Ont., Can.	15	Hazelton, Pa.	7
Augusta, Ga.	10	Council Bluffs, Ia.	10
Lakewood, Ohio	14	Colo. Springs, Colo.	15
St. Petersburg, Fla.	14	Auburn, N. Y.	15

Grain Elevator Fire

To the Editor:

The following question was asked in an examination in the city some time ago, and I would indeed appreciate your co-operation if you will give me an answer thereto:

How would you fight a fire, and what precautions would you take, in a grain elevator?

Cordially yours,

A. B.

Answer: Fires in grain elevators are difficult to fight. Even in the working house the only windows are so high up above the bins that streams cannot be used effectively from the outside. Bins have no openings between their tops and bottoms, so that where the grain takes fire there is no way of getting at it except through the top, which means the creation of hazards incidental to the weight of water discharged into the bins.

The long, unobstructed passageways through which the elevator conveyors travel make it possible for fire to travel from the bottom to the top of the working house without hindrance. The open passageway over bins, whether in the the self-contained type of elevator (working house and bins all under one shutter), or in the elevator having a working house and storage bins separate are unobstructed, and make possible the travel of fire through the structure horizontally.

If the conveyor belting is of rubber, or oil-soaked leather, it provides an additional aid to rapid spread of fire horizontally, for these belts run from one end of the structure over bins to the other. If the structure is not too high for ladders, the very first step that should be taken by the fire department is to open up over the fire. This is most essential where the fire is in the working house and extending upward. Without opening up it is impossible for men to work their way up the narrow stairs with the intense heat and smoke backing down upon them. On the other hand, once the top is open the heat and smoke are drawn upward, and a single line worked up along the stairway can accomplish the task. Ventilation, too, lessens the danger of dust explosion.

If the fire has originated due to dust explosion, it is likely that both the working house and galleries over bins will be involved. In this case it will be necessary to open up over the working house section, and after killing the fire there work along in the gallery, driving the smoke to the far end.

Care must be exercised in the use of water above bins, for here damage can be done. Water carelessly used and allowed to drain through hoppers into bins may result in the bursting of the bins. In using water over bins, keep streams from entering hopper unless grain therein is afire. In this case use no more water than absolutely necessary to handle the fire.

There is a lot of wooden work in the working house, reaching the entire height of the structure, and if this takes fire, about the only thing that can be done is to get heavy streams at work just outside the door and direct them upward to kill as much of the fire as possible, and then follow up with small streams.

When elevator houses are too high to reach the top with ladder on the outside, the only thing that remains to be done is to concentrate all lines into large streams inside doorways. Care must be exercised to protect the men from falling debris, such as broken conveyor belts or chains, platforms, etc.

Precautions to be observed in fighting grain elevator fires are to guard against hazards incidential to dust explosion and expansion of wetted grain. Grain dust, when mixed with air, is highly explosive. Streams will stir up dust lying along rafters, sills or other pockets. Take precaution in dusty atmosphere in grain elevators where open flame is present. Put no more water on the grain than absolutely necessary, for on swelling it exerts sufficient force to displace walls. Furthermore, the weight of the grain will be very much increased by water discharged therein, with the result that this additional weight may cause collapse of the structure.

Courses in Fire Protection Engineering

To the Editor:

Will you please inform me as to what schools give a course in fire protection engineering?

Very truly yours,

R. A. Y.

Answer: Below is a list of colleges and universities which are giving courses in fire protection engineering.

University of Minnesota, Minneapolis, Minn.
Iowa State College, Ames, Iowa.
University of Illinois, Urbana, Ill.
University of Kansas, Lawrence, Kans.
University of Wisconsin, Madison, Wis.
Michigan State College, East Lansing, Mich.
Courses on fire protection are being considered by the Ohio

State University, Columbus; University of Colorado, Colorado Springs; and University of Wyoming at Laramie, Wyoming.

The University of California, College of Agriculture at Davis, Cal., held a rural fire institute recently and which was designed primarily for those vitally interested in the rural fire problem of the state. For the above information the Editor is indebted to H. S. Walker, Engineer, National Fire Protection Association.

Comparing 3-inch and 2½-inch Hose

To the Editor:

Will you kindly advise me as to what advantage is to be gained by having 3-in. hose with 2½-in. couplings, or what are its disadvantages? J. N.

Answer: With reference to the advantage of using 3" with a 2½" coupling, over 2½" hose, the following may be said:

The friction loss in 3" hose with 2½" coupling is approximately one-half of that of 2½" hose with 2½" coupling. In other words, it is possible to use a line of 3" hose with 2½" coupling twice as long as a line of 2½" hose having 2½" coupling, and still getting about the same drop in pressure due to friction loss.

Where long lines are required, or where heavy flows are necessary, the advantage of using the larger diameter hose is tremendous.

Of course, it is less flexible and cannot be used as well as in stretching to inside fires nor up fire escapes. But for outside use, 3" hose should be employed for all long stretches or for stretches where large size nozzles are to be used.

Opening Shutters and Trap Doors

To the Editor:

Will you please outline what you consider the proper method of opening iron shutters and opening sidewalk doors at fires? S. T.

Answer: Iron shutters are found almost invariably fastened on the inside. Where hand holes are provided for opening the shutters they usually present no problem. But if the shutters are not provided with holes through which the latches can be reached, then one or more of the following methods must be employed:

First try striking the lower rivet of the fastening which holds the catch with the back of an axe. The fastening for the catch is on the inside of the shutter, but the rivets project through. When the rivet is struck as directed above, the latch may spring upward and out of the fastening, permitting the shutter to swing open. The blow with the axe should be at an upward angle. If this method does not bring results an axe, a lock-breaker or the sharp end of a claw tool may be used for prying the shuter out to permit unfastening the catch. The tool should be inserted under the shutter near the latch and the shutter pried out so that the latch may be raised with a stick or the blade of another axe.

If neither of the above is successful, then force the blade of an axe under the shutter and pry it up. This will often raise the catch from its fastening and the shutter can then be opened.

If the shuter is raised sufficiently it may be raised completely off its hinge. This is a good emergency measure for opening a shutter, but care must be exercised so that the shutter does not get away when raised off hinges and fastening and go sailing down to the street. Serious injury may result to firemen or bystanders, for a shutter so freed may sail out quite a distance from the building on its descent.

It is always good policy to warn those below to be on the alert when a shutter is to be opened by this method. Occasionally a six-foot hook can be used effectively in removing iron shutters from top floor windows by men working on the roof. The shutters may be lifted clear of their fastening. Breaking hinges should only be done as a last resort, for it is slow and hard work.

Opening sidewalk doors: Metal sidewalk doors may be fastened in any of several different manners. They may be fastened near the center or front with a padlock and hasp; or the fastening may be through two eyes near the building. Occasionally the doors are found fastened on the inside, although this is not the usual way of securing them.

With metal sidewalk doors, which are fastened beneath, a chisel is used for opening them. First find the master bolt where it projects through the door. This can usually be identified, for it stands by itself and is not, as a rule, in a row of rivets. This bolt fastens or supports the catch on the inside of the door. Use the chisel and cut the top of this bolt off, for by cutting off the top end of this master bolt it can be driven through inside of the trap door by using a punch and the door will immediately open up. Where the door is fastened with a padlock through staple over hasp on the outside, the lock is removed by striking it with the back of an axe, or by twisting the lock off with a lock breaker or claw tool.

Deputy Chief F. W. Gooderson Retires

Frederick W. Gooderson, Deputy Chief of the New York Fire Department and in the fire service for fifty years, was retired at the age of seventy. On October 15 members of the department arranged a dinner in his honor to mark his fifty years of service.

He was the dean of chiefs and was retired on his own application. Chief Gooderson will receive an increased pension of two-thirds his present salary. His two brothers, Matthew and Thomas, have been all retired from the New York Fire Department after attaining the rank of chief.

Chief Gooderson expects to take a trip to California at an early date, although nothing definite has been planned.

Deputy Chief F. W. Gooderson New York Fire Department

New Boat for Boston

A recommendation made by Commissioner Eugene C. Hultman of Boston that the fireboat (Engine 44) which has been in service since 1895 be replaced with a modern boat to cost $350,000, has been approved. According to the plans outlined by the Commissioner, the boat will be in service by 1931 or surely by 1932.

The city plans to equip the new police patrol boat to serve as an auxiliary fireboat.

Jersey City School Starts New Term

On January 30 the thirty-seventh session of the Jersey City Fire Department Training School was opened at the Fire Department Repair Shops. Battalion Chief Arthur Bell is instructor of fire practice and Deputy Chief James Tully is in charge of the repair shops.

The training consists of nine courses: General fire fighting, use of apparatus and tools, use of high pressure systems, care of hose, high tension electric currents, combustibles and explosives, care and operation of motor apparatus, first aid to the injured and fire department hydraulics.

The school is equipped with a complete model of a building showing its construction, an electric panel with all electric devices and controls, a standpipe and sprinkler system, two complete refrigeration systems installed by the Public Service and the Frigidaire Company, the latest life-saving devices, such as inhalators and oxygen helmets, gas masks and acetylene cutting tools. The school was reorganized by Mayor Frank Hague in 1913 when he was Director of Public Safety. The school is considered a most efficient institution and Chief Roger Boyle has received applications from other chiefs to permit department representatives to attend the school.

James Beggans, present Director of Public Safety, is a strong supporter of the training school.

Anniston, Ala., Buys Apparatus—Two 500-gallon pumpers have been purchased by Anniston, Ala., and delivery is expected in about forty-five days.

Ash Trays Standard for Automobiles—Harris A. Reynolds, Secretary of the Massachusetts Forestry Association has urged the passage of a bill to require installation of ash trays in all passenger automobiles. He said that more than thirty per cent of forest fires are caused by cigar butts and cigarette stubs tossed out of motor cars.

EXPLOSION OF FUEL OIL DESTROYS MARINE YARDS

Spark From Welding Tools Ignites Oil That Remained in Steel Tank.—Burning Oil Thrown on Frame One-Story Building

By THOMAS F. MAGNER

ONE man was painfully injured and damage in excess of $110,000 was done on January 17 when an explosion of fuel oil in a tank that was being welded threw blazing oil over a storehouse of the Luders Marine Construction Company at Stamford, Conn., completely enveloping the one story wooden structure, in flames.

Eight boats, stored in the building for the winter, were a total loss as the result of the fire, which, fanned by a shifting breeze, threatened for a time to spread to other buildings in the yard, all of wooden construction. Quick work on the part of the Stamford fire department in command of Chief Victor H. Veit, checked the fire.

The first fire alarm was received at Stamford headquarters at 9:35 A.M. from Box 134, located at the foot of Pacific street, near the Luders plant. Engine Companies No. 2, Truck Company No. 2 and Engine Company No. 1 responded. On the arrival at the scene Cheif Veit immediately ordered a second alarm which called out Engine Company

Two-Alarm Fire Destroyed Shipyard in Stamford, Conn.

No. 3 and Truck Company No.1. Five lines of hose was played on the fire.

A painter is in the Stamford Hospital, his body seared and badly burned from the blazing oil. He was to have started to paint an oil tank after it had been repaired.

A welder who was repairing the tank which exploded, was thrown twenty feet by the force of the explosion and was unconscious for some time. Injuries received by the painter were aggravated by the fact that the injured man, as soon as the blazing oil showered over him, started to run.

The burning oil, striking the front of the wooden storehouse, caught the building which blazed like tinder. Huge billows of smoke shot skyward and were visible for miles. Men in the employ of the Luders Company, who were working in the vicinity had no opportunity to enter the building to save any of the valuable wood, brass plate, and railing that was stored there.

Intermittent explosions in the storehouse, even after the fire had been subdued, caused by lacquer and other materials used in boat construction, drove the firemen back at different times, and exploding gasoline vapor in the tanks of the stored yachts, added fuel to the fire. Although gasoline had been drawn from the tanks the vapor as soon as it was struck by the heat exploded breaking the tanks into small pieces.

According to the welder, he was using an electric arc torch to weld the fuel oil tank, and he had been informed that the tank had been drained before he started work. The automobile used to carry the welding equipment, which was alongside the buildings destroyed, is seen in the accompanying illustration.

Chief Veit placed the loss at $110,000. Damage to the boats which are made at this plant on special specifications

Where the Fire Originated at the Marine Yards

In the left of the photograph is the tank that was being welded. Sparks ignited the fuel oil that remained in the tank and which caused an explosion. Blazing oil was scattered over a storage building and eight boats inside were destroyed.

and rated high in the yachting industry, was listed at $60,000 and to supplies stored in the building at $40,000. Loss to the building was placed at $10,000.

Foam Extinguishes Oil Fire

An oil and gasoline fire broke out in the yards of the Sunshine Oil Company, Rochester, N. Y., and threatened to spread to adjacent property. Explosions accompanied the fire. Fire destroyed 50,000 gallons of gasoline and 1,500 gallons of motor oil. The damage was estimated at $30,000.

Foam supplied by Foamite Generators was used in getting this fire under control. Three Foamite generators and three tons of Foamite powder were used. It was the opinion of Rochester newspapers and public safety officials that without foam equipment, the damage would have been much greater.

Two Views of the Rochestor Oil Fire

Upper—Playing a water stream on a tank to insulate it against the heat. Lower—Stephen B. Story, left, city manager of Rochester, watching firemen operating a Foamite generator.

Stephen B. Story, city manager of Rochester, and Battalion Chief Reagan, risked their lives during the progress of the fire to get under a heat expanded tank containing thousands of gallons of gasoline so that an open valve could be closed and a flow of gasoline on the ground, stopped.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousand.

Week Ending February 7

MINNEAPOLIS, MINN.—Elite Theatre destroyed 25
HENDERSON, KY.—Mayer dept. store, adj. property 50
CLENDENIN, W. VA.—Busines property damaged 25
PICAYUNNE, MISS.—Star Hotel and Picayunne Motor Co. 25
NEW ULM, MINN.—Frank Kretsch garage and dwelling 50
EVANSTON, ILL.—Residence of Richard F. Gloede destroyed 30
WINNIPEG, MAN.—Capitol theatre building 100
INDIANAPOLIS, IND.—Sawmill of Pearce Veneers, Inc. 50
DURANT, MISS.—City Hotel and Merchants' Bank.....75
HORSE CAVE, KY.—Owen's Hotel destroyed 50
POINT PLEASANT, W. VA.—River Steamer Clyde destroyed.....
MILWAUKEE, WIS.—Warehouse of Phil Orth Co. 25
GRIMMS, WYO.—Hardware store and garage .....
STATESVILE, N. C.—Plant of Statesville Veneer & Paint Co.....125
PERRY, ILL.—School building destroyed 45
BROOKLINE, MASS.—Home of J. Fred Curran 40
FORT MORGAN, COL.—Hill bldg. hotel and adj. property 80
KANSAS CITY, MO.—Nicollet apt. hotel damaged 40
NANAIMO, B. C.—Bldg. of Geo. Fletcher Music Co. 40
CAMDEN ON GAULEY, W. VA.—Masonic temple, adj. property..... 70
COUNCIL BLUFFS, IA.—Business bldg. destroyed 80
DUPONT, OHIO—Post office and other property 25
MONGOMERY, PA.—Miller & John buildings destroyed 80
PORTLAND, ME.—Whse. of Jacobson & Bernstein 50
LEXINGTON, KY.—Plant of Southwestern Tobacco Co..... 200
HOBOKEN, N. J.—Bldgs. at 100-106 Park Avenue..... 40
SANFORD, ME.—Prescott block damaged..... 25
MARSHFIELD, IND.—Ura Seger elevator destroyed..... 25
HANNIBAL, MO.—Plant of Hannibal Furniture Co..... 40
GROSSE POINTE, MICH.—Terrace apt. building damaged..... 80
CAMPBELLFORD, ONT.—Wallace block on Bridge St..... 40
INDIANA HARBOR, IND.—Grand Hotel, adj. business bldgs..... 80
FRANKLIN, IND.—Grace M. E. Church damaged..... 40
DODSONVILLE, TEX.—N. L. Wesson general store..... 30
MINEOLA, L. I., N. Y.—Plant of Mineola Apron Co..... 25
BAYONNE, N. J.—Several frame bldgs. on Broadway..... 50
PERTH AMBOY, N. J.—Palace Hotel damaged..... 25
SUDBURY, MASS.—Sudbury town hall destroyed..... 60
KLAMATH FALLS, ORE.—Plant of Arvin Fram Mfg. Co..... 25
ZEIGLER, ILL.—Store of Paul Halzman destroyed..... 60
WEST END, WIS.—Opera House bldg..... 80
BLACKLEY, KY.—Several buildings destroyed..... 50
JANESVILLE, WIS.—Bicknell Mfg. & Supply Co. plant..... 40

Week Ending February 14

LONGVIEW, WASH.—Plant of Central Mill Works Co..... 50
SHERMAN, TEX.—Bldg. occupied by Taliaferro Furniture Co..... 25
KEARNEY, N. J.—Shed of American Tar Products Co..... 30
WHITMAN, MASS.—Jenkins business block damaged..... 80
GREENBAY, WIS.—Hagemeister Products Co. bldg..... 40
DANBY, VT.—Ackert garage and adj. property..... 65
FORT WAYNE, IND.—Whse. of Shine Shoe Co..... 65
NEW YORK, N. Y.—Furniture whse., 340 E. 38th St..... 250

Just Another Freak Explosion

A fire and a blast destroyed the $500,000 absorption plant of the Petroleum Securities Company at Kettleman Hills. An unusual thing took place at that time. The explosion picked up a tank weighing forty-one tons that was placed on the end of a row of tanks, and tossed it upon the center of the pile.

MASON, MICH.—Plant of Laboratory Products Co..... 30
ANAMOOSE, N. D.—Store of W. H. Chapek destroyed..... 25
GREENVILLE, S. C.—Planters' Fertilizer Co. plant..... 400
LEXINGTON, KY.—Plant of Southwestern Tobacco Co..... 150
NEWTON, N. C.—High school destroyed..... 80
BOSTON, MASS.—Whse. of Home & French..... 25
BARRIE, ONT.—Mess bldg. at Camp Borden..... 50
LITTLETON, N. H.—Several business establishments..... 35
CHICAGO, ILL.—Gunther building damaged..... 40
FREMONT, OHIO.—Cutlery plant of Henkel-Clauss Co..... 25
MOBILE, ALA.—Kellner Millinery and adj. property..... 40
BIRMINGHAM, ALA.—Factory of Universal Shirt Co..... 80
GADSDEN, ALA.—Bldg. of B. B. S. Grocery Co. destroyed..... 35
COYTESVILLE, N. J.—New Venice Hotel destroyed..... 150
ANNAPOLIS, MD.—Annapolis High School bldg..... 25
MOOREHEAD, MINN.—Main bldg. Moorehead Teachers' College.... 150
OMAHA, NEBR.—Main bldg. Central Market..... 100

New Means to Extinguish Chimney Fires

The Central Railway Signal Company, of 272 Center Street, Newton, Mass., has just brought out a new device known as the Chimney Fire Extinguishing Fusee.

It is made in the shape of a railway fusee signal with friction cap ignition, no matches being required. To use it one simply tears up the tape which exposes the scratching surface, twists off the cap, turns it around, and lightly scratches it on the primed edge of the fusee.

In the case of a chimney fire connected with an open fireplace, the burning fusee is held high up in the fireplace. If the fire in the flue is connected with a heater or stove, the best way is to remove the stove pipe from the chimney flue and let the gases from the burning fusee be drawn up the chimney by the natural draught. The fusee burns for about four minutes and gives forth five different gases in which no fire can exist.

These gases are drawn up the chimney and not only extinguish the fire in the burning soot, but coat the inside of the chimney flue with an incombustible chemical which prevents the soot from burning. Certain gases are generated which exert a cooling effect on the chimney.

This was demonstrated recently in Arlington, Mass., when the department responded to an alarm for a roaring fire in a chimney. When the deputy chief removed the smoke pipe from the chimney the bricks were so hot that he could not touch his hand to them and the inside of the flue was incandescent with burning soot. A fusee was burned in the flue opening, and in a very short time the fire was out. The chief then found the chimney was only warm.

The value of this fusee is largely in its convenience. If the burning soot has not set fire to the roof there is no need to crawl over icy roofs to extinguish a chimney fire, the work being all done quickly and efficiently from below by the fusee.

This device has been used in Needham, Belmont and Newton with satisfactory results and was recently demonstrated to the Fire Chiefs' Club of Massachusetts by Walter L. Wedger, former state chemist, who is now connected with the Central Railway Signal Company.

The idea was developed and perfected by Chief Clarence W. Randlett, of Newton, and Mr. Wedger, with the result that the device has now been put on the market for fire department and general use.

The fusees have already been supplied to Newton, Needham, Attleboro, Cambridge, Gloucester, Medfield, Salem, Brockton, Winthrop, Winchester, Woonsocket, Peabody, Arlington, Fall River, Belmont, Waltham, Watertown, Gardner and North Adams.

HARRY BELKNAP.

Date Set for Oklahoma Convention

At a meeting of the Executive Board of the Oklahoma State Firemen's Association, June 2-4 was set as the dates of the coming convention to be held in Tulsa. A tentative program has been drafted which promises to be something entirely new. The training school is not to be held in connection with the convention as it has been during the past four years.

The new plan for the school is to train instructors and to have them take back a standard course of instruction to the respective departments. In this way, by July, almost every department in the state will be using the same standards.

Ex-Chief of Bristol, R. I., Dead—Spencer Rounds, ex-chief of Bristol, R. I., died at the age of ninety-one.

Chillicothe, O., Considers Pensions—Chillicothe, Ohio, is considering ways and means for establishing a fund to provide for firemen injured during duty.

I. A. F. C. Directors Launch Big Educational Program

Steps Taken at a Meeting in New York to Put Machinery in Operation at Once—Other Important Activities Outlined

IN order to get prompt and nationwide action on the large program of the International Association of Fire Chiefs, outlined at the Birmingham convention last year, President Ralph Scott called a special meeting of the officers of the Association, the directors, and the presidents of the district organizations, at New York, on Monday and Tuesday of last week. Every district organization was represented in addition to one hundred per cent attendance of the officers and directors.

President Scott and Executive Secretary Jay Stevens as well as Chairman of Exhibits, Chief Charles Alt of St. Louis, Mo., stopped at Winnipeg enroute to New York to look over the local situation there and be prepared to present specific data on the forthcoming annual convention before the New York meeting.

Educational Plan Under Way

The accomplishment of greatest importance at the meeting was the decision to start the educational program at once. This program, which is referred to elsewhere in this article, is designed to place before fire departments throughout the country, both large and small, instruction in modern methods of fire prevention and control.

The first action taken at the meeting was the selection of date of the annual convention, to be held at Winnipeg, Manitoba. President Scott reported the most desirable open dates to be Sept. 9th to 12th inclusive. These dates were accepted.

The hotel situation at Winnipeg was thereafter discussed, and the report of Traffic Manager Geo. Cobb was presented as follows:

The convention headquarters is to be the Royal Alexandra Hotel. The rates for this hotel are: room and bath for two (twin beds) $8.00; for three, with single beds, $9.00; for four, with single beds, $10.00.

The Fort Gary Hotel rates are: double room, twin beds, with bath, $8.00; double room, double bed, with bath, $7.00; double room, double bed, without bath, $4.00.

Marlborough Hotel: double rooms with bath, double bed, $6.00 and $7.00.

McLaren Hotel: double room with bath, $3.00 and $3.50; double room without bath, $2.00 and $2.50.

St. Regis Hotel: double room with bath, $3.00 and $4.00; double room without bath, $2.00 and $3.00.

St. Charles Hotel: double room with bath, $3.00 and $4.00; double room without bath, $2.00 and $3.00.

Chief Ralph J. Scott, Los Angeles, Cal. President, I. A. F. C.

For special blocks of rooms of ten and over applicants should write Geo. F. Cobb, Traffic Manager, 774 Albany St., Boston, Mass., before April 1st.

For individual reservations, applicants should write to Chief D. R. Boulden, Fire Headquarters, Winnipeg, Manitoba, Canada, stating the price of room desired, and giving the date and, if possible, the hour of arrival at Winnipeg.

Delegates intending to attend the convention at Winnipeg are urged to make their reservations as early as possible, for hotel accommodations are limited.

Exhibit Facilities

Chief Charles Alt, of St. Louis, Chairman of the Exhibit Committee, briefly outlined the exhibit facilities at Winnipeg. The exhibit hall is approximately one mile from the hotel headquarters, but the local committee on arrangements will supply continuous bus service to and from the hall to accommodate the delegates. The exhibit hall is sufficiently large to comfortably accommodate a big display of equipment.

Insofar as the customs problem is concerned, customs officials will be present at the exhibit hall, and apparatus or equipment sent for exhibit will be brought in under bond. The customs officers will be on hand when the material is shipped from the hall, to facilitate shipment back to the United States.

Regarding District Memberships

Chief Peter Steinkellner, of Milwaukee, President of the Great Lakes District organization, suggested that the constitution be so changed as to require automatic registration in the district organization of all members applying for membership in the International Association. In other words, if an applicant makes application direct to the International Association, $1.00 of the fee paid should be returned to the district organization, and the candidate enrolled therein as well.

Secretary J. J. Mulcahey approved the idea and pointed out that both the New England and Pacific Coast Associations do not wait until the convention to collect their dues but collect them in advance. This arrangement facilitates, very much, the registration at the convention. Action was recommended to the end that registration at the annual convention be permitted only to those who are members of the Association.

To Simplify Membership Records

In order to simplify the recording of members, as well as to iron out problems incidental to membership in District and International organizations and to correct inconsistencies at present encountered, a special committee was appointed by President Scott to supervise the work. The committee consists of Chief Peter Steinkellner; I. H. Case, Vice-President and General Manager, FIRE ENGINEERING; Sherwood Brockwell, and Jay W. Stevens.

The most important work considered at the New York meeting was the educational plan which President Scott had outlined for the Association during the coming and succeeding years. This plan, which was presented in preliminary form at the Birmingham meeting last year, has as its aim the institution of short courses or "fire colleges" throughout the country. But it will not stop with the so-called fire college. It is the ultimate aim to make available to fire departments throughout the country, both paid and volunteer, information which can be presented in departmental or sectional schools.

President Scott sprung a surprise on the delegates by displaying talking pictures which were subsequently described by the members present as being the most revolutionary and far-reaching innovation yet introduced into the fire service, from the standpoint of education. The talking picture shown, which is the first of an anticipated number of features, dealt with the inspection of buildings. It showed the drillmaster of the Los Angeles fire college, Assistant Chief Dodd, lecturing to a class, using stereopticon slides for this purpose. Chief Dodd was shown standing alongside a screen whereon was projected different views illustrating conditions met by inspectors, and the comments Chief Dodd made to the class in the picture were highly instructive.

Talking Pictures Make Best Talent Available

It is President Scott's plan to have such films produced covering the various topics to be presented in the short courses and fire schools. By the use of talking pictures it will be possible for departments throughout the country, no matter what size to have available the very best talent in the field of fire control. It is anticipated at this early date that at least fifty reels of film will be incorporated in the series of lectures. The speaker emphasized the tremendous advantage that this development would have in volunteer departments, particularly, where it is so difficult to secure speakers of ability.

As to the cost of the films to the Association, President Scott believes that this will be negligible as most of the reels can be made available through the generosity of organizations identified with the field of fire control or fire prevention. In order to compensate donors for the expense entailed in the preparation of these pictures, there will be incorporated in the introduction to these pictures, there will be incorporated in the introduction to the able through the generosity of the donor, who is cooperating with the International Association of Fire Chiefs in its educational program.

The cost of making a negative, 1,500 feet in length, of a lecture

would be in the neighborhood of $500. Each print from a negative cost around $30 and this price may be reduced by quantity production.

While the projection and sound equipment is comparatively expensive, most cities and towns have within their limits moving picture theatres possessing projection equipment. As such theatres are rarely open for the public in the forenoon, it will be possible for most fire departments to secure the cooperation of local theatres in showing these films in the forenoon to fire classes, and the afternoons may be employed by the classes in drill or other outdoor work.

Chief Scott also showed several reels of silent pictures illustrating salvage work and other operations in the Los Angeles school.

Stereopticon Slides

As a later development it is expected that stereopticon slides will be developed and made available to the fire schools throughout the country. These slides would be employed in illustrating lectures on various topics which for the present might not be applicable to sound picture production.

In order that no time might be lost in getting the course of instruction under way, the course will be developed in its entirety in the form of written instruction. As facilities become available, films will be completed so that the original course in its printed form will be made much more effective by utilization of these films.

Educational Committee Appointed

In order that the fire service throughout the country may be utilized in the development of the course of instruction, President Scott appointed a committee consisting of the eight district Association presidents and eight additional members whom they will appoint, to review the instruction as sent out and make comments or criticisms deemed necessary. As all sizes of cities are represented on this committee, it is believed that departments both paid and volunteer will be given equal weight in the development of the course. Fred. Shepperd was made Chairman of the Educational Committee.

The course as outlined met the approval of all delegates present. Assistant Chief Thos. F. Dougherty of the New York Fire Department endorsed it and expressed his belief that the use of motion pictures would prove very effective in conveying useful information to the fire service.

Sherwood Brockwell expressed his belief that the application of the instructions to volunteer fire departments would prove of tremendous value.

Association Already Active

President Scott pointed out that the Association is already making headway on the Pacific Coast in instituting fire schools. One three-day course has already been held in California, and other courses are to follow in close order in San Francisco, Portland (Oregon), and Seattle. These courses are designed as preliminary courses, and will be followed by ones of greater length as the course of instruction is developed by the Association.

President Scott expressed his wish that none of the present fire colleges already established by other organizations be interfered with, and that as the International Association gets its plans fully under way these other schools may come under the direction of the International organization.

As a future development it is believed by the President that the courses of instruction may be made available in foreign languages for use abroad. Due to a number of requests for such instruction that have been received from European cities, it is anticipated there will be a real demand for the course once its existence becomes known abroad.

Topics for Coming Convention

The Chairman introduced the subject of topics for the next convention, and several useful suggestions were made. Sherwood Brockwell pointed out that post-mortems of large fires or occurrences affecting fire departments during the past year would prove of interest and value to most of the members. He suggested that such post-mortems include "what happened, the causes, and suggested remedies."

Chief Taplin described a plan put in operation with good advantage in the Oklahoma Firemen's Association whereby a half day was devoted to departmental meetings. By this means all of the chiefs interested in one particular subject would gather together and discuss that subject. In this way a more intimate discussion was secured and all delegates present at such a departmental meeting would be particularly interested in the subject presented.

The chairman suggested the Association give thought to taking definite action on conditions which affect members of the Association, organizing itself so that it may be able to use its influence in aiding a member who may need such cooperation from time to time.

Chief Steinkellner expressed his belief that before the Association could expect many of its members to take a definite stand against conditions which would be considered other than to the best interest of their respective cities and departments, they must be protected. If not, as soon as they oppose political interests they may find themselves out of the fire service.

In this connection President Scott described how his department prepared an ordinance following the Cleveland disaster, and which was passed by the Council. This ordinance, while representing expense to affected interests, will go a long way toward preventing occurrences such as that in Cleveland in his city.

Chief Brosnan expressed the opinion that the International Association should back up the chiefs of smaller cities, where they are anxious to accomplish some improved condition in their respective towns. He believes that direct contact between the Association and local authorities would frequently accomplish the desired results.

At the suggestion of the Chairman, and upon motion of Chief Brosnan, carried unanimously, the President was authorized to appoint a Topics Committee for this year's convention. The motion was carried unanimously, and the President appointed the following on that committee:

Assistant Chief Thomas F. Dougherty, New York Fire Department: Chief J. E. Taplin, Blackwell, Oklahoma; and Sherwood Brockwell, Raleigh, North Carolina.

The committee will prepare a schedule of topics, and endeavor to develop a means whereby discussion will be brought forth on the convention floor.

Committee on Cooperation

President Scott brought up as the next topic the problem of developing cooperation with other organizations interested in fire control in this country. In order to develop such cooperation, he expressed the belief that a committee on cooperation would serve the purpose in an effective manner.

Chiefs Brosnan, Bogan, Charlesworth and Ziegler described results in their respective cities of cooperating with commercial organizations, and having members of the department address such organizations. They coincided with President Scott and expressed the belief that a committee such as suggested by the President would prove very helpful.

Upon motion by Chief Charlesworth that this committee be appointed, and seconded by Chief Brosnan, the matter was settled by unanimous vote. The President was instructed to appoint such a committee.

Chief Bogan added that he believed it would be a good move on the part of the Association to invite presidents of the international clubs such as the Rotary, Kiwanis, Lions, and others, to attend and address the annual conventions.

Grading Contest Reports

In grading the fire prevention reports submitted in the contest for the I.A.F.C. cups, a tremendous amount of work is involved. In fact, it usually takes two or three days for the members of the committee to properly rate them. In order to avoid burdening any of the members of the Association at the convention, with this task, Chief Brosnan offered the suggestion that the reports be rated prior to the convention, and at least one month be allowed for this purpose.

Upon motion by Chief Brosnan, which was carried unanimously, the Headquarters Manager was instructed to notify all contestants that reports be sent to headquarters a month prior to date of convention for rating. A committee will be appointed to work with Association headquarters in the rating of the reports.

Finance Committee to be Appointed

In order to properly carry out the big program of the Asso- President Scott emphasized the necessity of having sufficient finances, and, he recommended the establishment of a finance committee. He pointed out that the Association must have a very definite program laid out before it can expect cooperation from outside sources.

Upon motion, carried by unanimous vote, the President was authorized to appoint a finance committee.

Equipment Approval Discussed

The subject which brought forth most discussion was that dealing with proposed approval of equipment by the International Association of Fire Chiefs. It seemed the opinion of the majority that such approval is necessary and that definite action should be taken toward that objective.

President Scott suggested a committee on the Approval of Standards of Equipment, and recommended that at the next convention the Association go on record as assuming the responsibilities incidental to this particular function. Upon motion, which was carried unanimously, President Scott appointed the following committee:

Chief D. W. Brosnan, Albany, Ga.; Chief John Moran, Hartford, Conn.; O. E. Fearn, Supt. of Machinery, Fire Department, Washington, D. C.; Chief John Evans, New Orleans, La.; Chief Peter Steinkellner, Milwaukee, Wis.

Headquarters Assistant Authorized

It being the opinion of the delegates assembled that more efficient work could be accomplished by having located at headquarters in New York a young man capable of carrying on the detail work of the Association, a motion authorizing the President and Headquarters Manager to appoint such an assistant was carried unanimously.

Slides Shown

Following the regular business of the meeting, Chief Scott had projected on the screen several sets of stereopticon slides, used in connection with lectures at the Los Angeles fire college. These slides well emphasized their value as an aid in instructing fire department members in the various subjects such as salvage work, inspections, etc.

Upon completion of the slide presentation, President Scott called upon the officers of the different Associations for reports as to probable progress during the current year.

Chief John Evans, Chairman of the district organizations club, expressed his opinion that the current year would show a great increase in membership in the Association.

Chief R. N. O. Harrington, representing the Dominion Association of Fire Chiefs, outlined the contest being carried on for new members in the provincial association. He expressed confidence that his organization would show a marked increase in membership during the year.

Sherwood Brockwell, President of the Southeastern Association of Fire Chiefs, presented the report of the membership committee, of which he is a member. With regard to the Southeastern Association, there are now 113 members in that district organization. Additional growth is anticipated.

Chief W. J. Springer, President of the Southwestern Association of Fire Chiefs, reported 124 paid members in his organization. Chief Springer reported having appointed state vice presidents on membership, to serve in building up the membership of that district organization during the year, and efforts in this line will be continued.

Chief C. W. Greenfield, President of the Eastern Association of Fire Chiefs reported membership in his organization as follows:

Delaware, 24 active and 7 associate members; District of Columbia, 2 active members; Maryland, 44 active and 43 associate members; New Jersey 563 active and 41 associates; New York City, 115 active and 575 associates; New York State (outside of New York City) 40 active and 11 associates; Pennsylvania, 182 active and 227 associates; honorary life members, 8.

The total membership, therefore, in the eastern organization is 1,882.

Chief Greenfield reported a little trouble in getting the membership in New York State organized (upstate) to come into the International. They voted to come in as a body at the last convention, and while no definite action has yet been taken, he stated that definite evidence of cooperation between the New York and the Eastern associations is developing.

He also added that in his opinion the Secretary of the International Association of Fire Chiefs should not accept any money whatsoever for dues from individuals. Instead, these dues should be sent through the district organizations, and the district organizations make payment direct to the International to cover members so enrolled. The district organization, being a part of the International, the latter should not accept memberships from a district unless such members were also enrolled in the district organization, he contended.

Chief Lawrence E. Reif, President of the New England Association of Fire Chiefs, reported 600 odd members at the present time, all of which are affiliated with the International Association. He expressed the opinion that present efforts to increase membership would prove fruitful.

Chief Peter Steinkellner, President of the Great Lakes Association of Fire Chiefs, reported that action is under way at the present time toward increasing membership. A meeting is scheduled to be held at once, at which time reports on actions taken at the directors' meeting in New York will be presented, and steps outlined for developing greater membership. Chief Steinkellner reported that he expects to have 250 members this year. He also stressed the importance of having all membership applications to the International pass through the district organizations, tions, and permitting no members to join the Association direct without joining the district organization.

Chief W. A. Buell, President of the Missouri Valley Association of Fire Chiefs reported his district organization as not being very active. He expects that results will be accomplished as soon as the proposed activities of the International Association are put in operation.

In closing the meeting, President Scott called upon Executive Secretary Jay Stevens, First Vice-President Joseph Sullivan, and Second Vice-President D. W. Brosnan, to say a few words. All expressed the opinion that the Association had taken a very wise move in instituting the educational course, and expressed the belief that such activity will prove valuable in increasing the prestige of the Association throughout the country.

Secretary Stevens emphasized the point that the work has just been started, and it is up to each officer both in the International and district organizations to carry on the work from the start which was made at the New York meetings.

Delegates See Fire

Following the adjournment of the meeting the delegates were taken in fire department cars to the steamship Muenchen, a North German Lloyd liner, which had taken fire in the North River the day previous. The fire was still burning, and the department was still operating on it. The boat, partly submerged, had been gutted by the flames, doing damage estimated at $5,000,000.

In the evening the delegates were treated to a banquet by Nate Bass, a New York fire buff, and who, along with Commissioner Dorman, acted as hosts. Mr. Bass recently returned from the Pacific Coast where he was received very warmly by the fire department officials in that section of the country. It was as a gesture of appreciation that he provided the banquet for the crowd.

Those Present

Those in attendance at the meeting were as follows:

James Armstrong, Chief of Fire Department, Kingston, Ont., Canada, representing the Dominion Association of Fire Chiefs.
Charles Alt, Chief of Fire Department, St. Louis, Mo., Chairman, Exhibit Committee.
Robert A. Bogan, Chief of Fire Department, Baton Rouge, La., Director.
Sherwood Brockwell, Ex-Fire Chief, Raleigh, N. C., representing the Southeastern Association of Fire Chiefs.
D. W. Brosnan, Chief of Fire Department, Albany, Ga., Second Vice-President.
W. A. Buell, Chief of Fire Department, Parsons, Kansas, representing Missouri Valley Association of Fire Chiefs.
Peter B. Carter, Ex-Fire Chief, Camden, N. J., Treasurer.
Frank Charlesworth, Chief of Fire Dept., Providence, R. I., Director.
John M. Evans, Chief of Fire Dept., New Orleans, La., President, District Officers Club.
R. Gauthier, Chief of Fire Dept., Montreal, Canada, Director.
C. W. Greenfield, Fire Chief, Arlington Works, Kearney, N. J., representing the Eastern Association of Fire Chiefs.
R. N. O. Harrington, Fire Chief, McColl Refineries, Montreal, Canada, representing the Dominion Association of Fire Chiefs.
J. J. Mulcahey, Chief of Fire Dept., Yonkers, N. Y., Recording Secretary.
L. E. Reif, Chief of Fire Dept., New Haven, Conn., representing the New England Association of Fire Chiefs.
Ralph J. Scott, Chief of Fire Dept., Los Angeles, Cal., President.
W. J. Springer, Chief of Fire Dept., Texarkana, Ark., representing the Southwestern Association of Fire Chiefs.
Jay W. Stevens, State Fire Marshal, San Francisco, Cal., Executive Secretary.
Peter Steinkellner, Chief of Fire Dept., Milwaukee, Wis., representing the Great Lakes Association of Fire Chiefs.
Jos. N. Sullivan, Chief of Fire Dept., Utica, N. Y., First Vice-President.
J. E. Taplin, Chief of Fire Dept., Blackwell, Okla., Secretary, District Officers' Club.

In addition the following were also on hand:

Fire Commissioner John Dorman, New York; W. E. Mallalieu, General Manager National Board of Fire Commissioners, New York; George W. Booth, Chief Engineer, National Board of Fire Underwriters, New York; A. C. Hutson, Assistant Chief Engineer, National Board of Fire Underwriters, New York; Clarence Goldsmith, Engineer, National Board of Fire Underwriters, Chicago, Ill.; William Jerome Daly, New York, Thomas J. Dougherty, Acting Chief, New York Fire Department; William Ziegler, Chief of Fire Department, Hackensack, N. J.; Geo. F. Cobb, Traffic Manager, International Association of Fire Chiefs; Joseph H. Green, Vice-President, Eureka Fire Hose Mfg. Co.; A. G. Sullivan, Manager Motor Apparatus Sales, American La-France & Foamite Industries, Inc.; George Thomas, Canadian Manager, American-La France & Foamite Industries, Inc., Toronto; Fred Shepperd, headquarters manager, International Association of Fire Chiefs, and I. Herbert Case, vice-president and general manager FIRE ENGINEERING.

Date Set for Southwestern Chiefs' Meeting

The date for the third annual convention of the Southwestern Association of Fire Chiefs has been definitely set as April 14 to 16, at Oklahoma City, Okla. Chief George B. Goff, of the Oklahoma City Fire Department, as the host of the convention, is making great preparations to entertain his fellow chiefs, and an excellent program of entertainment is being arranged for their benefit.

The official program of the convention will soon be issued.

Deer Lodge, Mont., Has Department—A fully equipped fire department is now in service in Deer Lodge, Mont.

Fire Alarm Office for Jacksonville

Contracts have just been let by the city commission of Jacksonville, Fla., for the erection of a building for the fire, police and traffic signal bureau.

For several years the Commissioner of Public Safety and George P. Allen, Chief of the Signal Bureau, have been

Architect's Drawing of Fire Alarm Headquarters to be Erected in Jacksonville, Fla.

working for such a building which would, at the same time, satisfy the requirements of the National Board of Fire Underwriters.

The building will house all switchboards and necessary central office equipment, and it will be located in the center of the city in a most attractive park. There will be a basement under the one-story building. It has been stated that this is the first building of its kind in Florida.

Ex-Chief Cummings of Atlanta Dead

William Bascom Cummings, formerly chief of the Atlanta, Ga., department, died in a private hospital following a long illness, at the age of seventy-one.

He was recognized as one of the ablest fire-fighters in the history of the local department, and his service dates back to the volunteer department, prior to the time of paid firemen. In May, 1908, he fought the second largest fire that ever visited the city, and although the property damage was estimated at $1,000,000, there was widespread comment over his splendid leadership.

Chief Cummings was a member of the B. P. O. Elks and the Masons. He was also a member of the Old Guard.

His widow, a son, a daughter, two grandsons and a granddaughter survive.

Collapse of Escape Injures Firemen

A four-alarm fire in Philadelphia, Pa., weakened a fire escape on which there were a number of firemen, and the structure broke away from the wall, hurling the men to the street. One fireman was critically injured and six others were painfully hurt. The accident occurred after the blaze had been checked.

As a part of the "mopping-up" process the men were ascending the fire escape to the third floor. Just as the first of the squad had reached the third floor, the fire escape sagged away from its fastenings, although it did not fall. But all of the men were thrown to the ground.

Companies answering the alarms had to work under handicaps. The spot was in total darkness. In addition the streets were narrow, the buildings were old, and there was slush underfoot. Nor was that all. Fire broke out in three other properties and threatened to jump across a street. As the firemen were unable to fight the blaze at close range, water was poured on to the flames from water towers.

Chief Ross B. Davis and his deputy Jacob Walburt responded upon receipt of the second alarm.

Petersburg, Mich., May Buy Community Car—Petersburg, Mich., is considering the purchase of community fire apparatus. Many farmers have voted to support the move.

CORRESPONDENCE

Sparks' Club of Boston

To the Editor:

The fifth annual banquet of the Sparks' Club will take place at the Engineer's Club soon. At a recent election of officers, Benj. M. Ellis was elected President, Jack Basch, Secretary-Treasurer and Charles E. Beckwith, Sergeant at Arms. Arrangements are being completed to have a coffee wagon that will respond to all second alarm fires. A resolution was adapted at the last meeting that in the near future a tablet will be placed on any fire house in Boston, where a man has been killed while on active duty, as a memorial.

There are now thirty members in the club coming from all walks of life. The only requirements for membership are: That he shall not be under nineteen years of age, he must have an interest in the fire department matters and he resolves to aid the cause of our heroes in blue, "The Firemen." Our club is based on the same idea as the Second Alarmers' organization. We would appreciate very much to correspond with other clubs of this type.

Very truly yours,

2 Broadway, Somerville, Mass. ELWIN BECKWITH.

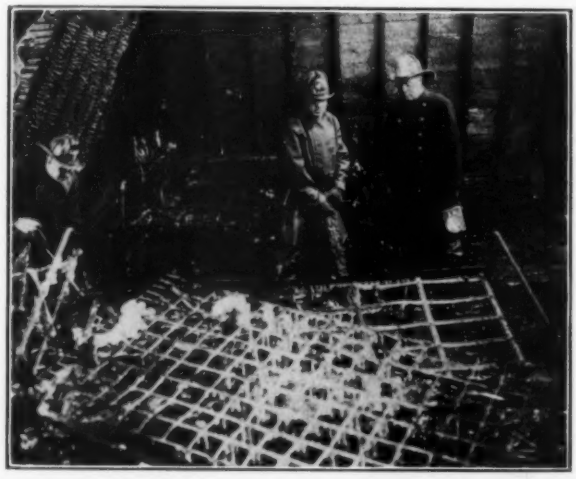
Three Dead at Brockton Poor Farm Fire

Three aged persons were killed and two more so seriously injured that they may die when fire swept the three-story frame dormitory of the City Farm in Brockton, Mass. Seventy-five other inmates of the institution which housed the aged poor of the city made their escape, some being assisted down ladders and fire escapes. The flames originated in the laundry.

The fire was discovered at 12:30 a. m. on February 11 by a cook who slept on the top floor. She smelled smoke and went downstairs to investigate. The fire had put the telephone, alarm box and electric wires in the building out of commission, and the alarm was delayed until San LaCrone, night orderly, was aroused and ran a half mile to reach an outside telephone.

Upon arrival of the first apparatus the building was enveloped in flames. Deputy Chief John Murphy at once ordered a second alarm, and when Chief F. F. Dickinson reached the scene he sounded a general alarm.

The efforts of the firemen were hampered by low water pressure. Fireman Fred Cournoyer and Patrolman Joseph



Charred Beds on Which Three Aged Inmates of the Poor Farm, Brockton, Mass., Were Found Dead

McKenney were injured while at work at the fire, after participating in the rescue of several persons who were groping about in the smoke-fiilled hallways.

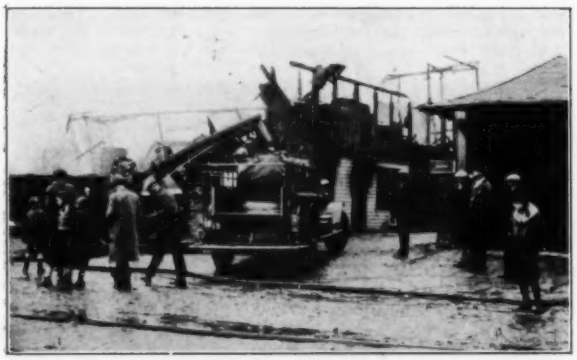
HARRY BELKNAP.

Commissioner Quinn of Montreal Dead—Thomas Emmett Quinn, of the Montreal Fire Commissioner's Court, and well known in both business and sporting circles, died at his home after a short illness. He was fifty-two years old and had been in ill health for some time. For many years he was president of the National Hockey Association. He is survived by his widow, a daughter and two sons.

Three Men Overcome at Lumber Fire

In fighting a fire that destroyed a lumber yard in the Crestmont district of Willow Grove, Pa., three firemen were overcome, and twenty-five volunteer companies from the city line to Doylestown and from Fort Washington to Bethayres were called.

Firemen worked under command of William T. Muldrew, President of the Montgomery County Firemen's Association.



Part of the Ruins at the Lumber Yard

The fire started in the stables in the rear of the yard and spread so rapidly that it was impossible to save the six horses stabled there. Flames fanned by a brisk wind, enveloped the stables and leaped across the yards to three concrete coal bins before the firemen arrived. From the coal bins the fire jumped to the lumber piles. Sparks fell on the roofs of nearby buildings but no serious damage resulted. During the height of the fire an oil tank in a yard exploded, spreading the fire to lumber stacks. The heat was so intense that firemen could not enter the yards which covered about four acres

It was only a short distance from the amusement park which was the scene of a bad fire in December.

A special message was relayed to the Philadelphia Second Alarmers by the Philadelphia Bureau of Fire, and the beverage dispensing apparatus was ordered out.

EDWARD H. SPRANGERS.

Biddeford Adopts Two-Platoon Plan

By a unanimous vote, the city council of Biddeford, Me., voted to adopt the two-platoon system for the permanent men of the department, thereby making this the first city in Maine to work under this plan. When the matter came up for consideration a petition signed by 1,163 citizens, including the largest property owners and factory heads, was presented. This city was also active in removing politics from the fire department.

Chief John W. O'Hearn of Watertown, Mass., and Secretary-Treasurer of the New England Fire Chiefs Association was present as a guest of Chief Eugene T. Ricker. He explained how the two-platoon system has worked out in Massachusetts and he gave figures of the salaries paid the men, together with the expenses of operation under this method. Chief O'Hearn said that this system is the only humanitarian way to care for the men. He also appeared before the legislature in the interests of this measure.

Six Saved by Life Net—Five girls and one boy jumped into nets when they become trapped by a fire that destroyed the Coggeshall Building in Newport, R. I.

New Fire House Urged for Wheeling, W. Va.—A district meeting was held in Wheeling, W. Va., to consider the erection of a fire house to protect that particular area.

Village Pays $900 for $50 Fires—According to the Chief's annual report, it has cost the village of Bedford, Ohio, $900 to extinguish fifty dollars worth of fires.

Firemen Added for New Station—An ordinance has been drafted for the appointment of a captain, lieutenant and eight pipemen in Madison, Wis., to be stationed in the No. 6 fire station recently completed.

Memphis Opens New House—A two-story brick fire station has been completed in Memphis, Tenn., and will be known as Station No. 17. Quarters for the men are located on the second floor.

Middletown Church Interior Damaged

The most destructive fire that has occurred in Middletown, Conn., in the past twenty years caused damage to the amount of $90,000 on January 29, when the entire interior of the main auditorium of the First Methodist Episcopal Church on Church Street, a brick structure, was gutted by flames. The entire Middletown Fire Department, under the command of Chief Michael W. Lawton, fought the flames for three hours before the blaze was subdued. It was the first test for Chief Lawton since he was appointed as head of the Middletown department.

The flames were kept from spreading into the Sunday School room and chapel which adjoins the main auditorium on the east and in the rear. The parsonage, a separate structure, is directly in front of the Sunday school building and this was also saved. Directly west of the church is an old frame dwelling and beyond that on the corner of Church and Broad Streets is the new synagogue of the Congregation Adath Israel. Neither of these buildings suffered any material damage, although the air was filled with sparks that shot one hundred feet skyward.

Fire officials believe that the blaze started from a short circuit at the side of the organ loft in back of the pulpit and at the extreme left of the auditorium. The fire was discovered by a passerby, who turned in an alarm from Box 32 located at Crescent and South Main Streets at 4:58 p. m. Another alarm was sounded at the same time from another corner. Upon arriving at the scene Chief Lawton ordered all apparatus in the city to the fire.

The First M. E. Church had many historic associations and its pulpit has been occupied at various times by some of the outstanding divines in the Methodist Episcopal denomination. The church is directly in the midst of Middletown's "churches center" with the First Baptist and South Congregational edifices less than 100 yards away and a Jewish synagogue much nearer.

THHOMAS F. MAGNER.

Fire Damages Peanut Plant

Three pump companies and one ladder company were employed to fight a fire that broke out in the plant of the Suffolk Peanut Company, Suffolk, Va. Engin Company No. 1 placed two lines in front of the building, No. 2 company placed one line to the south side and to the rear while the third company laid two lines under the tracks of the Norfolk and Western Railroad to the north side of the building. With this arrangement, the fire was under control at the end of seven hours, and the biggest part of the structure saved from damage.

The fire started on the third floor rear. The old frame four-story building was used as a cleaning unit.

The Peanut Plant Fire at Its Height

The total valuation of the property was $400,000, and the damage was adjusted by the insurance company for $20,863.

The apparatus at the blaze consisted of two 1,000-gallon pumpers, one 750-gallon pumper and a 75-foot aerial ladder under the supervision of Chief H. A. Applewhite.

Salem, Ore., Seeks New Fire Alarm—Salem, Ore., is attempting to secure a new fire alarm system. This move was recommended by the National Board of Fire Underwriters following a recent survey. It is probable that the system will have six circuits and be furnished with fifty fire alarm boxes.

OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

STEPS IN MODERNIZING A VILLAGE FIRE DEPARTMENT

Memory of Bad Fire Many Years Ago Prompted Action — Modern Apparatus Purchased by Popular Subscription — Change Justified

By J. W. RANDLETTE
Chief of Fire Department, Richmond, Me.

WITHIN the last three years, Richmond, Me., a town of two thousand population located on the Kennebec River, progressed from the hand drawn equipment class to a completely motorized Fire Department. All this was made possible by the splendid cooperation of the town's residents.

Chief J. W. Randlette

Fifty-eight years ago the village was nearly wiped out by a fire that devastated the business section. The memory of that fire lingers. A progressive group formed the Richmond Fire Apparatus Association and started a drive to purchase a triple combination pumper through the aid of popular subscription. Two thousand dollars were raised and the pumper was ordered. The truck was delivered May, 1927, and turned over to the town.

In February, 1928, one of the worst fires since the big one of 1871 broke out in the new high school building. It was the first test of the new apparatus. A hot air explosion practically demolished the building but with the aid of three streams pumped by the new machine, the fire was confined to the school. Residential buildings all about it were not touched, although clapboards on some were scorched. In the town meeting that was held in March, the town took up the remaining payments of the truck.

In June, 1927, shortly after the apparatus was delivered, a town ordinance was passed organizing a regular Fire Department under the laws of the state. Previous to this, the department was volunteer. The new organization consisted of three chiefs, one elected from each of the three fire wards, four companies of ten men, including a foreman and assistant foreman. The idea of the three chiefs was to have one representative from each ward.

One officer stated he wanted a hall fixed up where the department could meet, the motorization of other pieces of apparatus, a fire alarm system, fire inspection work, practice in resuscitation methods and first aid, and frequent fire apparatus drills. The men were very enthusiastic. Before the next meeting, a hall was provided for meetings and for the housing of the pumper. With the aid of several donations, the department had three pieces of motorized apparatus by July, 1928. Firemen were given instruction.

A fire alarm was installed August, 1928, consisting of a coded siren.

The pumper is only used on country calls. No. 3 Hose Company substitutes for the pumper; on a second alarm No. 2 Hose Company substitutes and No. 3 goes with the pumper. In this way the village is always protected.

However, all of the improvements and the new eqipment were not paid for. In the fall of 1928 the department conducted a three-day fair to raise funds. The profits paid a greater portion of the unpaid bills.

A GMC truck was found with a long chassis so that it could be converted into a ladder truck. This truck went into service September, 1929. Again the department was in debt, and again a three-day fair was successful in reducing the unsettled balance. Thus far the men had done all the necessary mechanical work, and they purchased their rubber coats, hats, gas masks, and department equipment. But the department was not satisfied with the progress made, and with the proceeds from the last fair, equipment was

Apparatus and Members of Richmond Fire Department

purchased for a salvage squad. No. 3 Hose Company was changed into a salvage company.

By a new ordinance, the chief in charge has the power to call upon the constables of the town for police protection at fires.

Inspection work has been rigidly followed, and many bad conditions have been corrected. A notice from the chief has always resulted in prompt cooperation on the part of the residents.

Through the officers' efforts, at the annual meeting the town passed an ordinance prohibiting shingle roofs in the business section, and the residential section surrounding the business district. A firemen's relief association has been formed which pays sick and accident benefits to men in the performance of their duties, and a small death benefit when a member passes away.

Men have been invited to give lectures on modern fire fighting methods. All members of the department are members of the State Firemen's Association. A large majority of the town's residents have endorsed what has been done to protect them against fire.

Thank Goodness, Those Days are Gone Forever

A celebration was held in Darby, Pa., to mark the 155th anniversary of the founding of the Darby Fire Company. Above are the Darby "Ram," the first engine used in the department, and two operators wearing the company belt and hats of that period. This pumper is capable of throwing from ten to fifteen gallons of water a minute. What an insignificant amount compared with the modern 1000-gallon pumper!

The Round Table

(*Continued from page* 150)

E. Willert, Chief, Mt. Clements, Mich.: Owing to the extensive growth of modern fire-proof buildings, I think the Pompier ladder is a thing of the past. This department has never used such equipment for fire fighting or life saving operations.

Alfred L. Mead, Chief, Quincy, Mass.: To all three of your questions on the Pompier ladder, my answer would be in the negative. Personally I do not favor such as being a necessary part of fire department equipment.

James A. Schooley, Chief, Medina, N. Y.: I believe Pompier ladder drills to be an important function of all fire departments.

C. Blom, Jr., Chief, Holland, Mich.: Our department is not equipped with Pompier ladders nor do we favor the use of them. Judging from drills I have witnessed, I believe the 80-100 foot aerial ladder to be more efficient and safer.

Carroll Nash, Chief, Dover, N. H.: I do not believe Pompier ladder drills and ladder work to be essential to the modern fire department. I do, however, approve of the use of such ladders only in extreme cases where a life is at stake. Up to the present date I have no knowledge of such ladders being used by this department for life saving purposes.

C. E. Gillen, Chief, Racine, Wis.: It is my belief that Pompier ladder drills are essential only for the exercise and confidence which the men might gain through such drills. Pompier ladders have never been employed in this department.

R. A. Buckler, Chief, Taylorville, Ill.: If a fire department is equipped with up-to-date aerial ladder apparatus, I do not believe Pompier ladders to be essential. We do not employ such ladders in fire department operations.

C. C. Royce, Chief, Joliet, Ill.: In my estimation, the Pompier ladder drill is important only for the exercise it affords. We do not employ this type of ladder in fire fighting operations.

J. S. Hynes, Chief, Grand Junction, Colo.: We do not employ the Pompier ladder in fire fighting operations, but I believe it to be of importance to the larger city departments.

Ernest G. Beckert, Chief, West New York, N. J.: Pompier ladder drills and Pompier ladder work are, I believe, essential to the modern fire department. My department does not use Pompiers in fire fighting operations.

John J. Gilday, Chief, Hoboken, N. J.: I certainly do consider Pompier ladder drills essential to the wide awake fire department. Pompier ladders are employed in my department, and on two occasions have been the means of saving lives.

C. W. Rapp, Chief, Logan, Utah: Drills employing the use of the Pompier ladder are, I believe, of considerable importance to the modern fire department. We employ such ladders in fire-fighting operations whenever the occasion arises, but have no record of lives having been saved through their use.

Answer to Previous Question

R. O. Mesnar, Chief, Canton, Ohio: Practically all inspection work is done by the officers. Business places are inspected twice each month.

My "Fire Prevention" work in the schools is carried on by personal visits to each school, at which time I have opportunity to present a suitable fire prevention message to the children. In this maner all forty-four schools are visited in about thirty days. I believe much good is accomplished by this means.

One Way of Ending the False Alarm Epidemics

Many of the false alarm runs are caused by boyish pranks. A successful plan has been used in Cambridge, Mass., by Chief James M. Casey, for several years, prior to the Hallowe'en ceremonies. Signs were posted by the Boy Scouts near every fire alarm box calling attention to the public that a false alarm may cost a human life.

Bridgeport Brass Fire Brigade Meets

The fire brigade of the Bridgeport Brass Company, Bridgeport, Conn., held its twelfth annual banquet. This unit was organized during the war and since then has proven its value towards building up plant efficiency. The brigade responds to every plant fire regardless of size. At the time of the first get-together, the annual report showed that the brigade answered ninety-two alarms. At the 1930 dinner, the report showed that there were only eight alarms, the banner year.

The firemen of the brigade are divided into two classes—fire-fighters and factory protection men. It is the object of the latter group to remove the causes of fires. The plants are kept as near spotless as possible. Boxes and material are neatly piled, and the aisles are kept clear. Waste must be placed in special metal containers.

A turkey dinner was served and this was followed by a program of professional entertainment.

Steals Apparatus for Joy Ride

There have been cases of policemen's pockets being picked, but it is rather unusual to learn that fire apparatus has been stolen at the scene of a fire.

A company in Orange, N. J., responded to a blaze caused by a fire in an upholstered chair. Firemen rushed into the building and soon extinguished the minor blaze. By the time their work was done, some resident who for some time had longed to drive fire apparatus, took matters in his own hands and went for a joy ride. Peace-loving natives of Orange were both surprised and shocked at the unusual amount of noise made at 4 a. m., by fire apparatus rushing about. Several reported the incident. So did the firemen who were left without a conveyance and were faced with the problem of walking back to the fire station.

But it was not at all difficult for policemen to capture the driver of a stolen fire truck. And of course the victim had the pleasure of telling his experience to the judge, who was not what could be termed "friendly."

Sends Alarm and Asks for Sentence

According to all rules of fire department etiquette, persons sending in bona-fire fire alarms should wait at the box to direct responding fire companies. Those who send in false alarms should pull the handle and run like—as fast as anything.

When firemen responded to a box in Brooklyn, there was no signs of a fire, but there was a man who was most anxious to introduce himself and to explain that he had turned in a false alarm.

He was taken before a magistrate where the most unusual person explained:

"I come from nowhere. I have no home. I've been on the bum for more than a year. I want to be locked up for at least six months."

The judge was lenient. The culprit was sentenced to two days in prison, although it had cost the city about sixty-seven dollars to turn out three companies to satisfy the person's desire to be arrested.

Cleveland, O., May Amend Film Storage Bill—An amendment has been introduced to the council of Cleveland, Ohio, to regulate the storage and use of nitrocellulose film which will permit the display of small quantities in stores. This move was suggested by manufacturers interested in amateur motion picture cameras. The ordinance itself provides for the storage of film in large quantities in metal containers and in vaults vented to the outside.

PROPOSED IMPROVEMENTS

Mansfield, Ohio—City contemplating erection of new fire station at estimated cost of $30,000.

Reseda, Calif.—City to vote on a bond issue at election to be held April 8, for erection of fire station on Reseda Blvd.

Le Roy, N. Y.—Town Board considering purchase of fire apparatus in rural fire protection as well as in village, according to reports.

New Castle, Penn.—Clayton H. Reeves, Supt., Bureau of Fire, recommended the purchase of a new pumper for No. 2 station, according to reports.

El Paso, Tex.—Plans for two new fire stations, one at Williams and Montana Sts., and the other at Santa Fe and Second, are being drawn.

New Baltimore, Macomb Co., Mich.—A special election is to be held in March to vote on a $3,500 bond issue for purchase of new piece of fire apparatus.

San Jose, Calif.—Purchase of new fire apparatus is being planned, according to reports. Charles Plummer, Chief of Fire Dept.

Bolivar, N. Y.—A petition is being circulated to call a special election to vote the purchase of a new 1,000 gal. pumper at estimated cost of $13,000. W. L. Dunning, Pres. of Fire Dept.

Tiffin, Ohio—Purchase of a new pumper and a chief's car for fire department was authorized by City Council. Bond issue of $15,750 was ordered to provide funds for purchase.

Higganum, Conn.—A volunteer fire department is being organized in Higganum fire district

Wanted

Fire Apparatus Salesman

Fire apparatus salesman wanted to represent one of the leading manufacturers in Eastern Pennsylvania and Southern New Jersey. Address Box 220, care of FIRE ENGINEERING, 225 West 34th St., New York.
2-5

Fireboat "John Kendall" Tested

(*Continued from page* 152)

The steam for operating the pump turbines and all auxiliary units, such as bilge pumps, boiler feed pumps, oil transfer, sanitary and circulating pumps, capstans, steering gear and fan is furnished by two Babcock and Wilcox Marine water tube boilers having a total evaporating surface of 6362 sq. ft., and a working pressure of 225 pounds per square inch, fitted with eight Cuyaure type B. & W. oil burners and arranged for forced draft of the closed stokehold type. Air pressure is maintained by a No. 4 double inlet, American Blower Company high speed forced draft fan with 24-inch diameter impeller direct connected to a 30 h.p. 1900 r.p.m. General Electric steam turbine. All turbines and auxiliaries discharge into a Wheeler condenser and operate on twenty-seven inches of vacuum. While under full operation no smoke or steam discharges from the stacks.

Egan Selling Buffalo Apparatus

J. J. Egan, formerly with the American-LaFrance & Foamite Corporation, is now Metropolitan District Sales Manager for the Buffalo Fire Appliance Corporation, Buffalo, N. Y., manufacturers of a complete line of fire apparatus, fire department supplies and equipment. Mr. Egan's New York address is 529 Union Ave., Bronx, N. Y.

"Chief Emeritus" Urged for Chief Wallace

It has been reported that Chief George Wallace of Cleveland, Ohio, will be advanced to "chief emeritus" with full pay and asked to serve the department in an advisory capacity and to instruct the younger members of the department. Neither Chief Wallace nor Edwin B. Barry, safety director, would discuss the report. The safety director stated:

"Chief Wallace can stay as long as he pleases. I shall never make any move which would remove him from active service. If he leaves active service, he is surely entitled to full pay. If he consents to remain in an advisory capacity, I shall regard him as a very valuable instructor for the younger men."

Chief Wallace will be eighty-two years old on February 22. He has been in the local fire service for sixty years—to be exact, on May 31, he will have completed sixty-one years service for the city.

Should the reported move go through, First Assistant Chief James Granger would be the first in line to succeed Chief Wallace as head of the department.

Chief Cribby, of Somerville, Given Helmet—Members of the Metropolitan Firemen's Post of the American Legion presented Chief Joseph A. Cribby, of Somerville, Mass., with a chief's hat. The presentation followed his promotion from deputy chief as successor to Chief Sewall M. Rich, retired.

CONVENTION DATES

April 7-10—FLORIDA STATE FIREMEN'S ASSOCIATION. 5th Annual Convention, Vero Beach, Fla. Secretary, F. C. Pfaender, Winter Haven, Fla. Secretary, Local Convention Committee, E. G. Thatcher, Vero Beach.

April 14-16—SOUTHWESTERN ASSOCIATION OF FIRE CHIEFS. 3rd Annual Convention, Oklahoma City, Okla. Secretary-Treasurer, Chief Tom Lyle, Okmulgee, Okla.

May 12, week of—NATIONAL FIRE PROTECTION ASSOCIATION. 34th Annual Meeting, Atlantic City, N. J. 1931 Convention probably to be held in Toronto, Can. Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 14—DEL-MAR-VA. VOLUNTEER FIREMEN'S ASSOCIATION. 1st Annual Convention, Cambridge, Md. Secretary, J. Emory Parks, Cambridge, Md.

May 19-23—KANSAS STATE ASSOCIATION OF FIRE CHIEFS, STATE FIREMEN'S ASSOCIATION and FIRE SCHOOL. Respectively, 14th and 43 Annual Convention and 2nd Annual Fire School Salina, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan. Secretary, Firemen's Short Course Committee, E. J. Stewart, Kansas Insp. Bureau, 701 Jackson St., Topeka, Kan.

June—EASTERN ASSOCIATION OF FIRE CHIEFS. 3rd Annual Convention, Baltimore, Md. (Exact date to be decided later.)

June—MINNESOTA STATE FIRE DEPARTMENT ASSOCIATION. 58th Annual Convention (probably second week in June), Excelsior, Minn. Secretary, Chief Fred Pfaender, New Ulm, Minn.

June 2-4—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 36th Annual Convention, Tulsa, Okla. Secretary-Treasurer, Charles Slemp, 820 East 19th St., Oklahoma City, Okla.

June 2-6—AMERICAN WATER WORKS ASSOCIATION. 50th Annual Convention, Hotel Jefferson, St. Louis, Mo. Secretary, Beekman C. Little, Rochester, N. Y. Offices of the Association, 29 West 39th Street, New York City.

June 4-6—NEW MEXICO STATE FIREMEN'S ASSOCIATION. 8th Annual Convention (Combined with Firemen's Short Course), Deming, N. M. Secretary-Treasurer, Theodore A. Rosenwald, Albuquerque, N. M.

June 9-11—SOUTH CAROLINA STATE FIREMEN'S ASSOCIATION. 25th Annual Convention, Beaufort, S. C. Secretary, R. S. Hood, Sumter, S. C.

June 11-13—MARYLAND STATE FIREMEN'S ASSOCIATION. 38th Annual Convention, Lord Baltimore Hotel, Baltimore, Md. Secretary, George R. Lindsay, Hagerstown, Md.

June 13-14—DAUPHIN COUNTY FIREMEN'S ASSOCIATION, 12th Annual Convention, Steelton, Pa.

July 8-11—MICHIGAN STATE FIREMEN'S ASSOCIATION. 56th Annual Convention and Fire College, South Haven, Mich. Secretary-Treasurer, H. L. Williams, Ludington, Mich.

July 9-10—DELAWARE VOLUNTEER FIREMEN'S ASSOCIATION. 10th Annual Convention, Georgetown, Sussex County, Del. Secretary, Sam H. Carson, Dover, Del.

July 22-23—WESTERN NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. 30th Annual Convention, Rochester, N. Y. Secretary, Henry A. Clark, Batavia, N. Y.

July 29-31—INDIANA FIREMEN'S ASSOCIATION. 13th Annual Convention, Lafayette, Ind. Secretary, Clem Smith, Fire Headquarters, Terre Haute, Ind.

July 31-Aug. 1-2—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 8th Annual Convention, San Francisco, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Street, San Diego, Cal.

August—UTAH STATE FIREMEN'S ASSOCIATION. 23rd Annual Convention, Provo City, Utah. (Exact date to be decided later.) Secretary, Charles A. Canning, Midvale, Utah.

Aug. 6-8—WASHINGTON STATE FIREMEN'S ASSOCIATION. 8th Annual Convention, Kelso, Wash. Secretary, H. S. Jenkins, Bellingham, Wash.

Aug. 19-22—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. 58th Annual Convention, Nyack, N. Y. Secretary, Fred A. Davis, Drawer X, Fort Edward, N. Y.

Aug. 26-29—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 37th Annual Convention, Oakland, Cal. Secretary, Jay W. Stevens, 343 Sansome St., San Francisco, Cal.

Aug. 27-29—VIRGINIA STATE FIREMEN'S ASSOCIATION. 44th Annual Convention, Phoebus, Va. Secretary, E. K. Landis, Pulaski, Va.

Sept. 2-4—KENTUCKY FIREMEN'S ASSOCIATION. 11th Annual Convention, Paducah, Ky. Secretary, Capt. S. G. Render, 940 Starks Bldg., Louisville, Ky.

Sept. 2-5—DOMINION ASSOCIATION OF FIRE CHIEFS. 22nd Annual Convention, Port Arthur, Ont. Secretary, Chief James Armstrong, Kingston, Ont., Can.

Sept. 9-11—ILLINOIS FIREMEN'S ASSOCIATION. 43rd Annual Convention, Peoria, Ill. Secretary, Assistant Chief Roy W. Alsip, Fire Department, Champaign, Ill. Exhibits, Chief Albert Herring, Fire Department, Murphysboro, Ill.

Sept. 9-12—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 58th Annual Convention, Hotel Royal Alexandra, Winnipeg, Man., Canada. Recording Secretary, Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibit Committee, Chief Charles Alt, Fire Headquarters, St. Louis, Mo.

Sept. 16-17—IOWA FIREMEN'S ASSOCIATION. 53rd Annual Convention, Boone, Ia. Secretary, Paul Soener, Independence, Ia.

Sept. 24-25—MISSOURI STATE FIREMEN'S ASSOCIATION. Annual Convention, Trenton, Mo. Secretary-Treasurer, M. J. Mulvoy, 3500 S. Grand Boulevard, St. Louis.

Oct. 7-9—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. 51st Annual Convention, Hotel Americus, Allentown, Pa. Secretary, Charles E. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 21-23—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. 49th Annual Convention (2d in year). Secretary-Treasurer, H. A. Webbert, Kearney, Neb.

Aid Called to Fight Whitman, Mass., Fire—Damage of $150,000 was caused by a fire which destroyed a three-story brick building in Whitman, Mass. Aid was summoned from Abingdon, Rockland and Brockton. Firemen suffered severely from the bitterly cold weather that prevailed.

INCORPORATED 1905

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Standard for Fifty Years

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	One	More Than One
Gold Filled	$5.00	$4.50
Silver	4.50	4.00
Gold Plate	1.50	1.25
Nickel	1.00	.75

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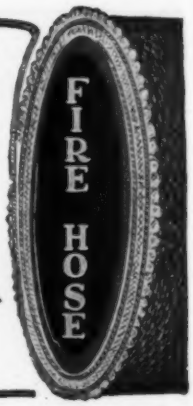

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What Causes Fires to Start?

(*Continued from page* 142)

There is another substance used which will prevent combustion—but before we pass to that, we will ask this question: Is water fully oxidized? Can anybody answer that? Is water a fully oxidized substance? What is the formulae of water? H_2O—instead of writing hydrogen 2 oxygen. Water is fully oxidized—2 parts of H with one part O give water. Water is fully oxidized, otherwise you would not be able to put out fires with water. You cannot put out fires with anything that is not fully oxidized. Water is fully oxidized and acts as a blanketing agent, preventing the oxygen from getting into contact with the burning substances.

Extinguishing Fires

Carbon dioxide is fully oxidized. It is very good, is cheap but not as cheap as steam and it puts out your fires very easily by its blanketing effect, preventing the oxygen from reaching the burning substance. Another effect it really has is not so much a prevention as diluting steam; carbon dioxide for a diluting, after they have reduced the oxygen content down to the point where it will burn. For example, your light will not burn. Why is that? Well, you have to have, in case of natural gas, just between five and fifteen per cent in order to get an explosion of gas; a gas explosion requires but five to fifteen per cent of gas in the air before it will explode; I mean the pure natural gas, not mixed with anything else. If you get over 15 per cent, it doesn't burn with an explosion. Why is it? Well because the proportion of oxygen per unit of gas is less, consequently the oxidation is not so vigorous. If you have below fifteen per cent, between five and fifteen, closer twelve, below fifteen down to five, you get an explosion and below five per cent you don't get any effect at all.

I am going to use this experiment here to show steam will put out a flame because one fireman himself said he did not know steam would put out a flame.

We will take carbon dioxide. What are the physical properties of carbon dioxide? Anybody know the physical properties of carbon dioxide? It is heavier than air. You can pour carbon dioxide from one cylinder to another. Now let us light a candle and see what luck I have putting it out;—it puts the candle out very readily.

We will just pour some CO_2 on that—it goes out very readily. I know a man who says he has never seen wind at all. If there is anything at all you can see, it is wind when it is excited, the same way you saw the candle being put out and you, perhaps, saw the gas. Carbon dioxide is heavier than air and I poured it from one vessel to another and put out the candle.

What other substances can we use? They have a substance called carbon tetrachloride which has much the same effect as carbon dioxide. Put carbon tetrachloride in here, shake it up well, so as to make a vapor, empty the carbon tetrachloride out of your cylinder, now we will pour some of this vapor into this jar. Let's light a candle and let's now pour the vapor over the candle. We put the candle out. Let's look and see what carbon tetrachloride is. There are four of these chlorines for the carbon. It is one of those things you are all familiar with, carbon, hydrogen and chlorine, in fact you can use chlorine in putting out fires.

You are familiar with foamite. I happen to know foamite is mixed with something which raises the surface tension and forms bubbles. I may show that readily and perhaps with substances they use. I think they use the stuff called sapony. I thought that would arouse your interest. I have some in a bottle here and now I will put it in water and you can see how readily it foams. The water contains carbon dioxide such as you have in the Babcock. If you have that in the water and have it effervescing, those bubbles are all composed of sealed tubes that act as a continuous blanket and a very efficient protection against a fire. I may be making some mistake from the standpoint of foamite people but that is the general principle involved.

(Abstract of paper talk delivered at the First Kansas Fire School.)

Plans Made for Dauphin County Convention—Plans are being made for the convention of the Dauphin County Firemen's Association which will be held in Steelton, June 13 and 14.

Chief Ringer Asks for Four New Stations—Chief Charles W. Ringer of Minneapolis, Minn., has asked the city to approve a $500,000 bond issue to construct four new fire stations within the next five years. The project includes a new central station to house all headquarters equipment and two loop fire companies. This building is estimated to cost $250,000. The other contemplated houses would cost $100,000, $75,000 and 45,000.

Harvard Locker Building Destroyed

Three alarms were sounded in quick succession on January 15 for a fierce blaze which destroyed the locker building of the Harvard Athletic Association on North Harvard Street in the Brighton section of Boston.

When District Chief Andreoli reached the scene with the first alarm apparatus flames were shooting from the roof and windows of the 2½-story frame and shingled building. The structure was a rambling one with three wings and burned with great rapidity and persistence, the fire being extinguished in one place only to burst out with redoubled fury in another section of the roof. Open spaces between the ceiling of the top floor and the roof added to the spread of the flames and there was no hope of saving the building.

The Boston fire department was hampered by low water pressure as there was a small dead end water main furnishing the supply to this district and it was found necessary to shut down a number of hose lines in order to obtain several powerful streams. Wagon guns and an Eastman deluge set were used as well as mobile lines.

Chief Daniel F. Sennott was in charge of department operations, aided by Assistant Chief Henry A. Fox. The first alarm was sounded from Box 5225 at 12.34 A. M.; followed by a second alarm at 12:37; and a third at 12:38. The "all out" signal was not given until 8:20 A. M.

A crowd of Harvard students gathered to watch the flames and to cheer the efforts of the firemen. Water seeped under

Fighting the Blaze in the Locker Building of the Harvard Athletic Association, Boston

the street and flooded the cellar of Morris Hall, one of the dormitories of the Harvard College of Business Administration, to a depth of nearly three feet. This was siphoned out.

Damage was estimated at $100,000. Two firemen suffered minor injuries.

HARRY BELKNAP.

Frank P. Foster, of Corning, Dead

Frank P. Foster, one of the organizers of the International Associations of Municipal Electricians, of the International Corning Glass Works, Corning, N. Y., died suddenly in his office at the plant at the age of sixty-three, while conversing with a co-worker.

In earlier life he was very active in the volunteer fire department. He installed the first fire alarm system thirty-five years ago, and held the position of Fire Alarm Superintendent. He was one of the paid firemen when the paid department was instituted in 1905.

Later he joined the Corning Glass Works as Electrician and was appointed head of the plant fire department. Mr. Foster served in this position for many years.

Chicopee, Mass., Awards Apparatus Contract—Chicopee, Mass., has ordered a Maxim triple combination pumper, and two Ford chassis which will be converted into squad wagons.

Parma, O., Opens New Fire House—A new fire station costing $40,000 has been placed in service in Parma, Ohio. Movies, dancing and refreshments were provided.

FIRE DEPARTMENT ACTIVITIES

Lynfield, Mass., May Buy Pumper—Lynfield, Mass., is considering the purchase of a pumper.

Catasauqua, Pa., to Have Fire Alarm—A fire alarm system will be installed in Catasauqua, Pa.

Pumper Ordered by Jonestown, Pa.—A 500-gallon Hahn pumper has been ordered by Jonestown, Pa.

San Antonio Buys Station Site—A site has been purchased in San Antonio, Tex., for the erection of a fire station.

Deadwood, S. D., Has New Apparatus—New fire apparatus has been delivered to Deadwood, S. D.

Unionville, N. J., to Buy Apparatus—Unionville, N. J., has approved the purchase of fire apparatus to cost $7,500.

Eaton, O., Hopes to Buy Apparatus—Funds are being raised in Eastern, Ohio, for the purchase of fire apparatus.

Glendale, Pa., Buys Pumper—A pumper for $3,000 has been purchased by Glendale, Pa.

Margaretta Township Plans Department—A fire department is planned for Margaretta Township, Ohio.

Little Falls, N. Y., Has New Ladder—A new Buffalo ladder truck has been placed in service in Little Falls, N. Y.

Kingston, N. J., to Dedicate Fire House—A new fire house is to be dedicated in Kingston, N. J.

Buzzer to Notify Firemen—A buzzer is to be installed in the homes of all firemen in Greevale, Pa., to notify them of all fires.

Hazleton, Pa., to Buy Chemical Car—Hazleton, Pa., is to invite bids for the purchase of a chemical and hose car for the East End Company.

Amherst Station Inspected—The new fire house in Amherst, Mass., has been opened for public inspection. Several gifts have been received of furnishings for the station.

Aerial Ladder Urged for Bellingham—The purchase of an aerial ladder truck has been recommended for Bellingham, Wash.

Centralia, Wash., Firemen Get Increase—All members of the Centralia, Wash., Fire Department with the exception of the Chief were granted a $10 a month pay increase.

Bryan, Tex., Has New Station—The Bryan, Tex., department has moved into its new fire house. The old house had been used for sixteen years.

Station Nearly Finished in Amherst, Mass.—A new fire station is being erected in Amherst, Mass., at a cost of $50,000.

Springfield, Mass., Seeks New Apparatus—Chief Arthur Montmeny, of Springfield, Mass., is seeking the purchase of new apparatus to replace pumpers eighteen years old.

Santa Barbara to Complete Tower—The fire drill tower at Cota and Garden Streets, Santa Barbara, Cal., is to be completed.

Milford, Conn., Extends Fire Alarm—The fire alarm system of Milford, Conn., has been extended to the central section of the municipality.

Racine Not to Build Fire Station—Because of the expense in building a new city hall, it will be impossible to erect a new fire house in West Racine during this year.

New Fire House Opened in Hattiesburgh, Miss.—A new fire station has been opened in Hattieburg, Miss. Four additional firemen have been added to the force.

Port Murray, N. J., Buys Pumper—Port Murray, N. J., has purchased a 350-gallon Hahn pumper. It will be housed in their newly completed fire station.

Middletown, O., May Have New House—Plans are being made for the construction of a new fire station in Middletown, Ohio.

Fire House Urged for Warren, O.—Several civic organizations are sponsoring the move to erect a new fire house in the East Side section of Warren, O.

New Pumper Wanted in Wilmington, O.—Firemen of Wilmington, Ohio, have petitioned the Board of Control for the purchase of a Seagrave pumper.

Fire House Urged for Marion, O.—Chief McFarland of Marion, Ohio, has recommended the erection of a new fire station in the eastern part of the city.

Kanawha City, W. Va., Opens Station—A new fire station has been opened in Kanawha City, W. Va. Six men working on two shifts will be assigned to the new house.

Westminster, Md., Banquet Well Attended—Over two hundred persons attended the annual fire department banquet of Westminster, Md.

East High Bridge, N. J., Orders Squad Wagon—An order has been placed by East High Bridge, N. J., for a Hahn squad wagon. Delivery is expected within sixty days.

Carbondale, Pa., Surveying Fire Hazards—Chief McNulty, the fire marshal and mayor of Carbondale, Pa., are to conduct a fire survey of the city to determine possible fire hazards. Schools are also to be inspected.

Defiance, O., Wants Rural Apparatus—A movement has again been started in Defiance, Ohio, for the purchase of apparatus to be used for rural fire protection. The unit considered will cost $4,500.

Aquashicola, Pa., to Form Department—A meeting has been held in Aquashicola, Pa., to form a fire department. At present the town depends upon neighboring communities for fire protection.

Mansfield, Mass., Wants New Station—Chief Arthur E. Soper of Mansfield, Mass., has asked the Board of Selectmen to favor the erection of a new fire station to replace a present building.

E. Hollywood May Have House—It is believed that East Hollywood, Cal., will soon request the construction of a fire house. Petitions for such an improvement are being circulated.

Cottage Grove, Ore., Chief Honored—S. L. Mackin, of Cottage Grove, Ore., was presented with a fountain pen and pencil set at the annual Fire Department banquet, in honor of his fifteen years service.

Delphos, O., Raises Pay of Call Men—In the future call men of the Delphos, Ohio, department will receive two instead of one dollar for each fire alarm answered. The pay of the chief was boosted from fifty to two hundred dollars a year.

Portland, Ore., Using New Alarm System—The new fire alarm system of Portland, Ore., has been placed in service. The headquarters building was authorized in 1926. It is erected on a triangular piece of land and is well protected against possible fire. The city spent $21,000 on the building and $50,000 for equipment.

Norristown, Pa., May Buy Pumper—Chief Peter V. Hoy, of Norristown, Pa., stressed the need of another pumper equipped with a booster tank. Chief Hoy and his assistants emphasized the age and delapidated condition of some of the department's equipment. It is hoped that one new piece of apparatus will be bought each year.

Assistant Chief Injured at Fire—It is feared that Assistant Chief Robert Blake of Marshalltown, Ia., received a cracked pelvis when he fell from a porch roof while fighting a fire. When he fell he held an axe in his hand, and those who saw the accident, believe that the chief should consider himself lucky he is alive.

Dunmore, Pa., Urges Improvements—Chief Frank J. Murphy, of Dunmore, Pa., recommended the appointment of an inspector and an electrician, the installation of fifteen additional fire alarm boxes, appointment of two permanent firemen and fire protection for several unprotected parts of the borough.

Olympia, Wash., to Furnish Fire Service—The council of Tumwater, Wash., voted to accept the proposal for Olympia to furnish fire protection. The charge will be fifty dollars for the first hour of service at a fire and thirty dollars for each additional hour. Olympia is furnishing fire protection to Tenino.

Santa Paula, Cal., to Hold Inspections—An inspection will be held of all homes and business places in Santa Paula, Cal., and then at monthly intervals. Twelve firemen who are to serve as call men are to be appointed. The city is very much upset over the large number of fires that have occurred recently and the possibility of an increased fire insurance rate.

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FALSE ALARMS

PROTECTING PROPERTY

Early in the evening fire broke out in a hotel, and in a very short time, the volunteer firemen were on the job.

The next day everyone was talking about how Joe Miller had risked his life to save a friend. The minister of his church decided to pay a call.

"Tell me, Mr. Miller, how you were brave enough to risk your life to save your friend."

"I had to. He borrowed my tuxedo yesterday."

The Girl Friend said she allowed as how her father doesn't ordinarily care for strenuous exercise in a really big way, but she heard her mother say that just last week the old boy was out seven nights running.

SWIFT JUSTICE

While the mills of the Gods grind slow, they certainly grind sure. Consider the modern illustration of the local bootlegger. The town was very much excited over his arrest. It furnished plenty of talk for barbers. One of the endless conversationalists remarked:

"I see they finally arrested the Bootleg King."

"Yeh, it's about time they got him. He's been parking his car in front of hydrants for weeks."

THE MOVING FINGER

A visitor was being shown through the station.

"What does that writing on the wall mean?" she asked her official guide.

"Simply this, madam. The telephone has been used for other than fire department business."

THE MAIN REASON

Gus was blessed with a great superfluity fore and aft, and like all men of that type, possessed an extremely pleasing nature. No matter how heated others on the apparatus floor became, Gus still retained his smiling countenance. After a row, a participant asked:

"I wonder why it is that fat fellows like Gus are always so good natured?"

"It's because it takes them so long to get mad clear through."

"And will you love me as much as this when we are married?"

"How can you doubt me? You know I've always liked married women best."

PROGRESSIVE

As a newly licensed driver was leisurely driving his car down the street, he was startled by the sound of a siren on an approaching ladder truck. To get out of the way, he increased his speed. He ran past a stop signal. Instantly a motorcycle cop went after him and shouted at the driver:

"Hey there! Can't you read?"

"Sure I can read, officer, but I can't stop."

PART OF THE SHOW

The costume manager was in conference with the theatre owner concerning the new musical comedy. He had a long list of things he wanted for the cast, and as usual many items were checked off.

"Good heavens, man, why do you want stockings for that hot mama act?"

"Did you ever go to a fire and see pumps without hose?"

Nearly any woman can get along with her husband when they're both riding in the same patrol wagon.

SAME TYPE

Most every one is attracted to a fire, and in the crowd that assembled to watch a pumper operate there was a rural resident who looked his part. The operator thought that he would have some fun with his rustic spectator.

"First automobile pumper you ever saw, I suppose?"

"No sir, but it's very much like it"

UNDER COVER

Fire started in the theatre during the dress rehearsal of the bathing beach scene. Without waiting to gather their belongings, the cast made a quick dash for the street. One fireman who had better intentions than his gruff manner indicated, took hold of one shivering blonde, thrust his hand out and said:

"See here, young lady. You'll have to put this blanket on."

The girl gave him an icy look.

"What are you trying to do, big boy, put something over on me?"

WHOOPEE COSTS

Most every young fellow has a desire to come to New York to see the New Year in. Bob was one of the crew who had that night off, but who never had the thrill of seeing New York during the holiday season. He asked a more experienced man about how much money he ought to take with him.

"Well, you just figure out about how much your expenses will be, multiply by two and then add five dollars."

Before you reach for a sweet, be sure the young lady is agreeable.

A LIFE SAVER

At a dinner party one of the guests remarked:

"You can poke as much fun as you want about the cigarette lighters, but I know for a fact that Tom Jenning's lighter saved his life."

"How was that?"

"He tried to see if there was any gas in his car."

"This is going to be good," said the father as he led his son into the reform school.

FROM THE BOTTOM

Few fathers care to see their sons follow their footsteps, professionally. When Joe's son was of age to earn a living, he found a position for him outside the department. Often the son would come to the station to meet the father.

"So your son is learning the silk business?" questioned one of the men.

"Yes," replied the proud father, "but he's only gotten as far as stockings."

A RARE SIGHT

In some municipalities the chief holds office by virtue of his many fraternal associations.

Two youngsters were discussing the merits of their respective fathers and one said:

"My father is an Elk, a Moose, an Eagle and a Lion."

"Gee whilikens!" remarked the other very much surprised. "How much does it cost to see him?"

Many a perfect limb helps the girl along who hasn't much of a family tree.

Drawing by "Art" Espey

"Hey, Bill! It just came to me what the Commissioner meant when he said there were such good openings in the Fire Service."

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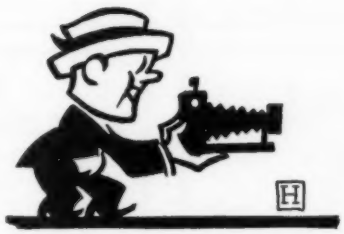

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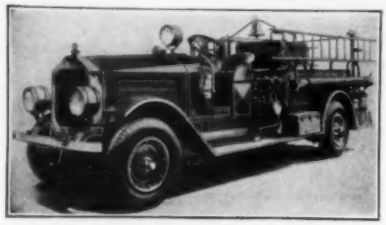

All Sizes

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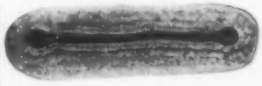

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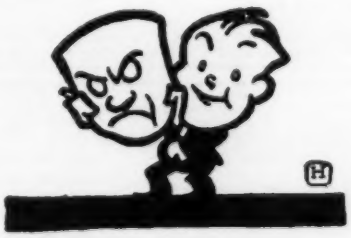

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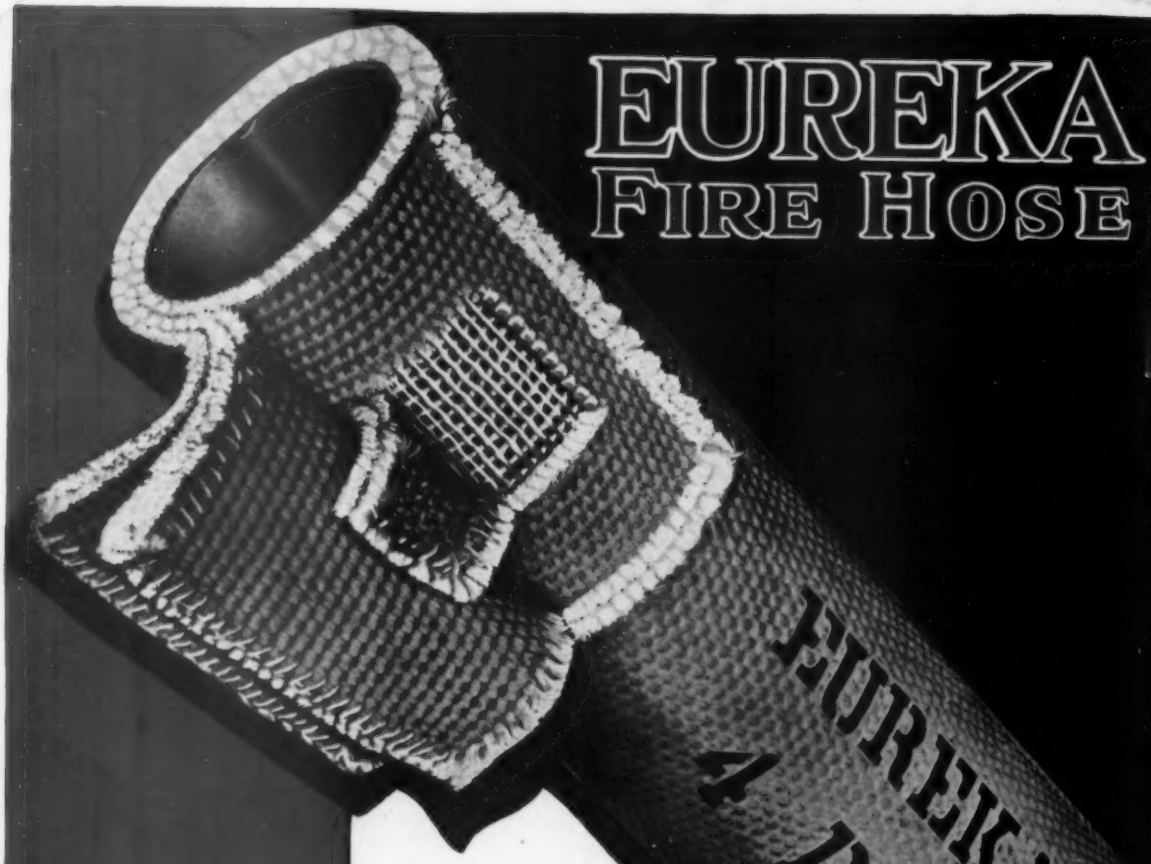

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